THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XLII. SATURDAY, JANUARY 6, 1883. NO. 1.

ORIGINAL LECTURES.

PHILADELPHIA COUNTY MEDICAL SOCIETY LECTURES.

ON THE PHYSICAL EXPLORATION OF THE LUNGS BY MEANS OF AUSCULTATION AND PERCUSSION.

A course of three lectures delivered by invitation before the Philadelphia County Medical Society.

BY AUSTIN FLINT, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

LECTURE I.

THE TRUE MODE OF STUDY AND ITS REQUIREMENTS AS REGARDS AUSCULTATION AND PERCUSSION. THE SIGNS OBTAINED BY PERCUSSION.

Delivered November 25, 1882.

MR. PRESIDENT AND MEMBERS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY: The invitation to give a few lectures on some subject pertaining to practical medicine was accepted by me with a full appreciation of the high compliment and the responsibility therein involved. I cannot adequately express the gratification which I shall feel if, at the close of the lectures, I may be able to persuade myself that any expectations on your part, beyond the gratification of a complimentary disposition, have been measurably fulfilled. The subject selected, with the approval of the Committee on Lectures, is one to which for many years I have given much attention as a clinical student, and a clinical teacher. It may seem to be a hackneyed subject, but I hope to succeed in showing that it is one which at the present time claims attentive consideration with reference to a further increase, and a more general diffusion of the usefulness of its practical applications in the diagnosis of diseases.

INTRODUCTORY REMARKS.

The discovery of auscultation by Laennec in 1816, led to the resurrection of percussion as a method of physical exploration, a method brought into existence by Auenbrugger, but which the publication in Latin, in 1761, of the *inventum novum*, failed to keep alive, and which Corvisart, by his translation of Auenbrugger's treatise into the French language with abundant commentaries, published in 1808, had vainly attempted to reanimate. Restored to life by Laennec, percussion has since been hand in hand with auscultation. Each of these two methods has given invaluable aid to the other. They cannot with propriety be disjoined in practice, and they are necessarily associated in treating of the diagnosis of diseases. It would be of little use to discuss the relative advantages of the two methods. Doubtless, were we to be deprived of one of them, we could better afford to lose percussion than auscultation, but the advantages of either would be greatly diminished by the loss of the other. A more useful point of inquiry is, What progress has been made in our knowledge of physical exploration by the two methods conjointly since the time of Laennec? In answer to this inquiry, I have no intention to review in detail the labors of those who have cultivated this field in practical medicine since Laennec's day. They occupy a considerable space in the medical literature of the last half century. I shall offer some general statements, by way of introduction to the lectures, to which your attention is invited. The facts in auscultation which Laennec discovered constitute much stronger evidence of his genius than the discovery of the method. The latter, as he relates, was accidental. It is a marvel that he ascertained so much of what is known of auscultatory phenomena at the present time. The medical student of to-day may read his treatise with advantage on account of the accuracy of the observations, as well as affording a model of truth-loving candor and unaffected simplicity. It would have been strange indeed, if, in the interpretation of his observations, he had not fallen into some errors, and had he not failed to recognize all the directions in which the subject affords scope for clinical study. Of the many works which have appeared since the publication of Laennec's treatise, I will mention here but one, namely, the work of Skoda, published in 1839. This work passed through several editions, and was translated into the French and the English language. A considerable portion of the work is devoted to a refutation of Laennec's physical explanations of auscultatory phenomena. The tone of criticism is dogmatical, and it might perhaps be said to be arrogant. The author substitutes his own theories for the explanations given by Laennec, classifies differently the physical signs obtained by auscultation and percussion, and designates their distinctive characters by different terms. I shall refer to this work repeatedly in the course of my lectures, and oftener with dissent than with concurrence. The work has had a controlling effect upon the views of German medical writers up to the present moment, and, also, not an inconsiderable influence on the views of writers in other countries. I do not hesitate in expressing my belief that thereby auscultation and percussion have been injured as regards progress and the diffusion of knowledge in these branches of practical medicine.

Much as has been acquired by means of these two methods of exploration within the last fifty years, the place which they now hold in medical practice is not, as it seems to me, proportionate to the labor given to them, and the space which they now occupy in medical literature. Many practitioners make but little use of them. They are considered as constituting a specialty. There is lack of unanimity among those who bestow upon them special consideration, or regard the number of physical signs, the characters by which they are designated, and the significance which respectively belongs to them. The want of unanimity in the names used to designate different signs was so apparent in the discussion by the members of the Section in Medicine at the meeting of the International Medical Congress in 1881, that a committee was appointed to report an uniform nomenclature, at the next congress. This committee is composed of representatives from England, France, Germany, and the United States. It remains to be seen what they may accomplish.[1]

Writers are apt to enter largely into theoretic discussions relating to the mechanism of physical signs, discussions which are not essential, often unprofitable, and not infrequently leading to errors of observation.

[1] The members of this committee are as follows: Prof. Austin Flint, of New York, Chairman; Prof. Ewald, of Berlin; Prof. D'Espine, of Geneva; Dr. Powell and Dr. Mahommed, of London.

By some writers signs have been needlessly multiplied, and the subject has been rendered apparently mysterious and abstruse by over-refinements. These are obstacles which have retarded progress in the knowledge of auscultation and percussion, and limited their practical use by medical practitioners.

THE TRUE MODE OF STUDY AND ITS REQUIREMENTS AS REGARDS AUSCULTATION AND PERCUSSION.

The true mode of study has been overlooked. By adopting and keeping steadily in view the requirements of the true mode of study, as I firmly believe, the obstacles just referred to will be avoided, our knowledge of physical signs will have a degree of precision which will make them far more available in diagnosis than hitherto, and the practice of auscultation and percussion will have a simplicity which should place its advantages in the hands of every intelligent, well-educated practitioner of medicine. What are the requirements for these desirable objects?

Firstly. A recognition of the fact that the signs obtained by means of auscultation and percussion are not directly diagnostic of particular diseases, but that they represent abnormal physical conditions which are common to a greater or less number of different diseases. The sign which approaches nearest to a pathognomonic significance, namely, the crepitant râle, does not exclusively belong to pneumonia. Signs which denote solidification of lung, namely, bronchial and broncho-vesicular respiration, increased vocal resonance, and bronchophony, are incident to various affections. The same is true of other signs. Given the presence of certain signs representing certain abnormal physical conditions in any case of disease, the diagnosis is to be determined by these signs taken in connection with the previous history of the case, and the present symptoms. It would be superfluous here to give illustrations, and I need hardly add, that this first requirement involves, in addition to a practical acquaintance with physical signs, knowledge of the important abnormal physical conditions which the signs represent, and of the relations of these conditions to the diseases in which they occur.

Secondly. It is to be acknowledged and borne in mind that positive proof of the diagnostic significance of the physical signs, as representing abnormal physical conditions, must be based exclusively on the constancy of the association of the latter with the former. The only solid foundation for practical knowledge of auscultation and percussion, thus, is on the facts obtained by clinical observation and by autopsical examinations, the facts from these two sources being ascertained in conjunction with each other. To establish physical diagnosis purely on the basis of principles of physics, is to build upon a sandy foundation. Not infrequently the conclusions concerning the significance of signs, logically deducted from physical data, are in direct conflict with facts derived from clinical observation. Reasoning *à priori* from the data of physics, the accuracy of observation is apt to be impaired. I would by no means imply that it is not desirable to explain, on the principles of physics, the connection existing between morbid physical conditions and their representative signs, but the diagnostic significance of the latter should in no way be thereby affected. It is useful as a means of corroborating and illustrating the significance of signs, to imitate, by artificial contrivances out of the body, as nearly as practicable, the physical conditions which the signs represent; and I hope to be able to show that the essential characters of nearly all the important signs obtained by auscultation and percussion may be artificially represented. I shall also introduce results of experimental observations which will show that many of the important physical signs may be profitably studied by making use of healthy and diseased lungs removed from the body. Most of the respiratory and vocal signs, as well as those obtained by percussion, may be reproduced after death by artificial respiration and the transmission into the air tubes of vocal sounds. The study of physical signs in this way is useful, in order to become familiar with their differential characters, and also with reference to the mechanism of their production.

The most unreliable course in forming judgments concerning the existence of certain morbid physical conditions, is to judge from the mental impressions produced by certain sounds, not heeding any well-defined characters of the latter. Here full sway is allowed to the imagination. The auscultator will be likely to find proof of physical conditions, the existence of which he had already inferred from the symptoms. Even Laennec's treatise is open to criticism on this score. Thus, he distinguished cavernous respiration as a sound giving an impression of air passing into a larger space than when the respiration is bronchial; he described pectoriloquy as complete when the voice seems to traverse the whole length of the stethoscope, whereas it traverses it partially when the pectoriloquy is incomplete, and the sign which he called a masked-blowing murmur (*souffle voilé*), was based on the idea of a movable veil between a cavity and the ear of the auscultator.

Thirdly. Individual physical signs are to be recognized as such only when their constant connection with distinct abnormal physical conditions has been established. This requirement is a security against an undue multiplication of signs by individualizing sounds which may be variations of established signs, or the significance of which has not been ascertained.

Fourthly. The differential characters of different signs would be distinct, clear, and simple. This requirement is of special importance as bearing on the true mode in which auscultation and percussion are to be studied. Naturally, the discoverer of auscultation was led to compare the sounds which he heard to those which are familiar. Hence, Laennec compared bronchial respiration to the sound of a current of air through a tube; œgophony to the cry of the goat; the crepitant râle to the crackling of salt on coals of fire; and the normal respiratory murmur to the sounds from the mouth of a person sleeping and breathing tranquilly. Skoda and others have undertaken to give an idea of auscultatory sounds by imitating them in the pronunciation, with the whispered voice, of different letters of the alphabet. A little reflection must, I think, render it evident that such comparisons cannot supply differential characters of the different signs obtained by either auscultation or percussion with that distinctiveness, clearness, and precision which are essential. There is but one way in which these differential characters can be made clear, distinctive, and precise. This is by means of what I have termed, by way of distinction, the analytical study of the sounds in health and disease. By the analytical study I mean, resolving the sounds into those elementary characters by which all sounds, natural or artificial, musical and non-musical, are practically discriminated. Now the chief differential points by which different sounds are distinguished from each other, relate to intensity, pitch, and quality. The distinctive characters of the sounds obtained by auscultation and percussion should be based mainly on points of difference derived from intensity, pitch, and quality. As thus derived, the differential characters may be made clear, distinct, precise, and also simple. Minor points of difference, which, however, are not to be overlooked, and in some instances are highly important, relate to the duration of sound, the rhythmical succession of inspiratory and expiratory sounds, and

the apparent distance from, or nearness to, the ear of the listener. More than thirty years ago, I was led to study the sounds obtained by auscultation and percussion with special reference to their variations in pitch. The results of the study were given in an essay which received a prize from the American Medical Association, and which was published in the *Transactions* of the Association of 1852.[1] I believe I was correct in commencing the essay by saying that "Very little attention has hitherto been paid to variations in the pitch of sounds heard in the practice of percussion and pulmonary auscultation." Although since that date increased attention has been paid to auscultatory sounds and those obtained by percussion, the distinctions pertaining to this source of differential characters, which were pointed out in that publication, have not, as yet, been fully and generally accepted. I have indicated, since the publication of that essay, additional distinctions which, as it seems to me, are of much importance in their applications to diagnosis. In treating of physical signs, in these lectures, it is but fair to my hearers to state that certain points of distinction relating to the pitch and quality of sounds originated in my own observations, and, on the other hand, it is but right to claim whatever merit may belong to my orignal observations.

Fifthly. The last requirement to be mentioned relates to nomenclature. The names by which the physical signs are designated, and the terms applied to their distinctive characters, should be correctly and clearly expressive. It is, of course, very desirable that the nomenclature should be uniform, as regards words and their meanings, in all countries. Words which denote theoretical views are objectionable. An example is the term "consonating," applied by Skoda to certain sounds produced by the breath, and the voice, and to certain râles. The term denotes not only a theory, but one the correctness of which is maintained by few, if any. The terms "full" and "empty," applied by the same author to sounds produced by percussion, convey no well-defined ideas, and it is not easy to understand what the author means by them after carefully reading his explanations. These terms are still in use by German authors, as also another singularly unsatisfactory term, namely, "indeterminate." Skoda applies this term to respiratory sounds which are neither bronchial nor vesicular, not attempting to give any positive, distinctive characters, and, indeed, declaring that this is impossible. I hope to show that it is not in the least necessary to use such a negative term as "indeterminate" in designating a group of respiratory signs. Such names as "wooden resonance," and "band-box resonance," are too loose to be appropriate. Especially objectionable is the designation of signs after the names of those who have described them. The names Williams, Skoda, Gerhardt, Biermer, and Wintrick have been introduced into the nomenclature of physical exploration by some German authors.

PERCUSSION.

It is usual to consider percussion before considering auscultation. The compass of the former is much the smaller, and its consideration prepares for that of the latter. Moreover, in the clinical employment of the two methods, percussion generally precedes auscultation.

PERCUSSORS AND PLEXIMETERS.

Auenbrugger was content with percussing by the fingers directly upon the thoracic parietes. The introduction of the plexímeter by Piorry was an improvement, but of vastly less importance than was claimed by him. It has perhaps never occurred to some of those present to practise immediate percussion. It will be found on trial less unsatisfactory, probably, than had been supposed. The credit of using a hammer, instead of the finger, as a percussor, is attributed to Wintrich. The hammer devised by him, and I believe still used in Germany, is a curiosity. As it has been but little used in this country, it may have interest in the way of novelty to some present, and I therefore exhibit it. As you see, the hammer part of the instrument, which is made of brass, is long and heavy. The point is tipped with India rubber. The handle is light and thin, with excavations to receive the ends of the thumb and fingers. It could hardly have been more clumsily devised to be used by striking directly upon the plexímeter. This was not intended; but the hammer is to be thrown upward by the movement of the hand in which it is held, and then allowed to fall upon the plexímeter. It is difficult to see in what respect this manner of percussing has any advantage over that in which the blows are made directly, and the disadvantages are obvious. It would not be profitable to discuss the different varieties of percussors which are in use with us. I shall simply show one which I have used for many years, and which I have found to answer admirably. It consists of a piece of India rubber in the form of a double cone, held in a ring at the end of a handle made of vulcanized rubber. It is light; it makes but little noise in coming into contact with whatever is used as a plexímeter, and it is durable.

I need not say that as both a plexímeter and a percussor, the fingers of the two hands answer every purpose in private practice. The chief object of an artificial plexímeter is to save the fingers from injury by frequent percussion. The plexímeter which I show I have used for some time. It is made of vulcanized India rubber, is light, easily held, and readily applied to the chest.

THE NORMAL VESICULAR RESONANCE ON PERCUSSION.

A thorough practical knowledge of the characters which distinguish the sounds in health is, of course, essential, as preparatory for the study of the morbid signs furnished by percussion and by auscultation. I have always found it difficult to enforce sufficiently this obvious truth in teaching medical students, and I suspect that with practitioners difficulty in the recognition of morbid signs is often attributable to an imperfect appreciation of the characters distinctive of normal sounds. Studied analytically, the characters which distinguish the normal resonance on percussion are resolvable into those derived from pitch and quality, inasmuch as the intensity varies in different persons and in different regions of the chest. Some exercise is necessary for a correct appreciation of pitch, as distinguished from quality, in the sounds obtained by percussion. Errors are sometimes attributable to a lack of this exercise. The relative variations in pitch are easily expressed by the terms high and low. On the other hand, the peculiar quality of any sound cannot be expressed in language. Let it be supposed, for example, that one should endeavor to describe the quality of the tones of a violin, or of any other musical instrument, to one who had never heard them. An idea of the quality of sounds can only be given by comparison, and it is rare for two sounds produced in different ways to resemble each other so closely that the one will give a clear idea of the other. Moreover, the variations in the quality of sounds are innumerable. As an illustration, let it be considered that the human voice has so many diversities, irrespective of pitch and intensity, that among many thousand persons it would be difficult to find two voices precisely alike. Hence, the peculiar quality of

[1] This essay was entitled "On Variations of Pitch in Percussion and Respiratory Sounds, and their Application to Physical Diagnosis."

sounds must be learned by direct observation. Now, as regards the pitch and quality of the normal pulmonary resonance, the quality is *sui generis*. It cannot be described. Evidently the quality is dependent on the fact that the air which gives the resonance is contained in the pulmonary vesicles or alveolæ, and not in a free space, and, for this reason, the name *vesicular*, which is used to distinguish this peculiar quality, is appropriate. The pitch, as compared with the abnormal sound obtained by percussion, is low. I believe I am correct in saying that no abnormal sound obtained by percussing the chest is ever lower in pitch than the normal vesicular resonance in the same subject. The pitch of the normal resonance is evidently determined by the same physical conditions to which the vesicular quality is attributable, for the pitch is lower in proportion as this quality is marked, and *vice versa*.

In order to represent, artificially, vesicular resonance, an article must be found which resembles lung in the essential physical condition, namely, containing air in innumerable minute spaces. A feeble imitation is obtained by percussing a sponge. My friend, Dr. J. S. Thatcher, has suggested a much better article—a loaf of bread. Bread in the form of a loaf gives a resonance of considerable intensity, and it is a fair representation of the vesicular resonance. It should be covered with a cloth in order to diminish the noise produced by the contact of the fingers or the percussor, and thus to elicit better the sound from the air contained in the interstices of the loaf. The upper crust stands in place of the thoracic wall. The resonance elicited illustrates the lowness of the pitch, with a pretty close approach to the peculiar quality of the normal pulmonary resonance.

When it is considered that all the knowledge furnished by percussion, which is available in the physical diagnosis of pulmonary diseases, may be comprised in four signs, one is led to exclaim, What is to hinder the possession of this knowledge to the fullest extent by every practitioner! There is no hindrance beyond unanimity in the recognition of the existence of these signs, and that practical acquaintance with their differential characters which requires but a very moderate amount of time and attention. Arranged in pairs, the four signs are, 1st, flatness and dulness; 2d, tympanitic and vesiculo-tympanitic resonance.

FLATNESS AND DULNESS.

The first pair represent different degrees of the same morbid physical conditions, namely, either the presence of liquid in the pleural cavity, liquid in the vesicles, or in the interstitial lung tissue, or solidification of lung incident to pneumonia, phthisis, pleurisy, and other affections, or morbid growths within or extending into the intra-thoracic space. It is to be understood that the term flatness means no proper sound or resonance. It is absence of sound. It cannot be defined more distinctly than by this statement. There can, of course, be no degrees or variety of flatness.

In dulness, the resonance is more or less diminished. There are degrees varying from the slightest diminution to that approximating as closely as possible to flatness. Flatness has, of course, neither pitch nor quality of sound. Dulness, considered as a distinct sign, always has more or less of the quality which belongs to the normal resonance, that is, the vesicular quality. If this quality be entirely wanting, the resonance is tympanitic, as will presently be seen. A fact which I pointed out in my essay published in 1852, is that in dulness the pitch of sound is invariably higher than that of the normal resonance of the person examined. This fact is of importance, as assisting in the recognition of a slight degree of dulness. It is of much importance in certain cases which will be referred to in connection with vesiculo-tympanitic resonance. The elevation of pitch now generally enters into the account given by medical writers of dulness or percussion, which it did not prior to 1852.

The essential distinction in the other pair of signs, namely,

TYMPANITIC AND VESICULO-TYMPANITIC RESONANCE,

relates to quality of sound. In a purely tympanitic resonance, there is complete absence of the vesicular quality which belongs to the normal resonance. Conversely, a resonance in which the vesicular quality is absent is always tympanitic. This sign represents the following morbid physical conditions: air in the pleural space, pulmonary cavities, solidification of the upper lobe of a lung, the resonance then being derived from air in the extra-pulmonary bronchial tubes, and conduction of resonance from the stomach or colon.

The tympanitic resonance, as just distinguished, is artificially reproduced whenever resonance is derived from air in a free space of greater or less size, instead of being derived from air in a collection of minute spaces like those of the pulmonary vesicles, or the interstices of the bread-loaf. The intensity of the resonance will depend on the amount of free air, the thickness, elasticity, and tension of the walls of the space containing the air, and other circumstances, aside from the force of the percussion. However feeble and distant, the resonance is always tympanitic if it be devoid of that peculiar quality due to the fact that the air is in minute spaces, namely, the vesicular quality. It is, perhaps, a common impression that for a resonance to be tympanitic, it must be louder than the normal resonance. Intensity is an unimportant element so far as regards the distinctive characters of the sign. It may have any degree of gradation between much intensity and great feebleness of sound. Air in the pleural space frequently yields a tympanitic resonance which is notably intense. As a rule, the resonance is comparatively feeble over a pulmonary cavity, and where derived from air in the extra-pulmonary bronchi, the sound being conducted through solidified lung.

A tympanitic resonance is invariably higher in pitch than the normal resonance. I believe this statement to be correct, although the reverse is stated by some medical writers, who are in error, as I suppose, either from reasoning incorrectly on principles of physics, or from not accurately distinguishing pitch from intensity and quality. The latter mistake is liable to occur without some training of the ear, and careful attention. It is by no means as easy to distinguish variations in the pitch of non-musical sounds as of musical notes. Some exercise is requisite to secure accuracy, and the discrimination is undoubtedly somewhat difficult for those who have not what is called a "musical ear."

Other things being equal, the pitch is lowered the larger the free space containing air. The bass-drum has a notably lower tone than the kettle-drum, and the non-musical resonance from an inflated bladder or an India-rubber bag of considerable size, is lower than that from a small hollow India-rubber ball. Percussion over a flatulent cæcum gives a higher pitch of resonance than over the stomach; the pitch of resonance over the colon distended with gas is lower than the resonance from either the stomach or cæcum, and the resonance over the small intestine is still lower. Tension has much to do with pitch; this is shown by the effect of tightening a drum-head. The effect of the difference in the material of the walls of the space enclosing air, upon the pitch and intensity, is shown by comparing the sounds produced by beating a drum on its head and on its sides. The many variations corresponding to those in the physical conditions which give rise to tympanitic resonance, may have interest for some who

are curious as regards the *minutiæ* of acoustic phenomena, but, if two varieties to be presently noticed be excepted, the variations in tympanitic resonance are of no utility in their practical applications to physical diagnosis. They are burdensome and perplexing to the student of percussion who desires only to acquire the knowledge which is practically useful. One who wishes more than this will find in the treatise by Eichhorst on the *Physical Methods of Investigating Internal Diseases*, enough to gratify curiosity respecting minute and superfluous details.

A practical point of importance pertaining to tympanitic resonance, is its ready conduction for a greater or less distance beyond the limits of the space whence it comes. In this respect it differs notably from the normal vesicular resonance. A gastric tympanitic resonance is often conducted upward over a considerable portion of the thorax on the left side. In like manner, the resonance from the colon may extend as far as, or even above, the upper boundary of hepatic flatness. It follows that this resonance is unreliable for determining with accuracy the lower border of the liver, the boundaries of the spleen, and the space occupied by abdominal tumors.

AMPHORIC AND CRACKED-METAL RESONANCE.

Tympanitic resonance, with either an amphoric or cracked-metal intonation, claims but a passing notice. The familiar illustrations of these varieties by filliping the check made more or less tense, and by striking the closed hands upon the knee, cannot be improved upon. The intonations may be produced by percussing India-rubber hollow balls of different sizes. Clinically, the fact that the intonations are sometimes heard on percussing over the solidified upper lobe of the lung in situations over the extra-pulmonary bronchi, is not to be overlooked. And the fact that, with this exception and the rare instances in which in these situations they are found in health, they are invariably cavernous signs, renders them of much value in diagnosis. Another practical fact is perhaps not always appreciated, namely, that these intonations may very often be perceived by the ear close to the open mouth of the patient, when otherwise they escape observation. Still another fact deserves mention. With the pectoral extremity of the binaural stethoscope close to the open mouth of the patient, they may be recognized when they are not readily perceived without this instrument. Finally, it is to be borne in mind that they are found at some times and not at other times, owing to the varying condition of cavities as regard emptiness, and of the bronchial tubes as regards freedom from obstruction.

The last of the four signs is the

VESICULO-TYMPANITIC RESONANCE.

I must hold myself responsible for the name and the description of the characters distinctive of this sign. The name expresses the most diagnostic feature. The vesicular and the tympanitic quality are combined in varying proportions. An essential feature, however, is an increase in intensity. The intensification may be greater or less in degree. The pitch of the resonance is invariably raised. It is raised in proportion as the tympanitic predominates over the vesicular quality. This sign is therefore distinguished from the normal resonance by the presence of more or less of the tympanitic quality of sound, by greater intensity, and by a higher pitch. It is distinguished from the tympanitic resonance by the presence of more or less of the vesicular quality of sound. It is distinguished from dulness by its intensity. The only difficulty in its recognition practically, pertains to its discrimination from tympanitic resonance. The predominance of the tympanitic quality, with a proportionate elevation of pitch, may be so great that it may seem to be purely tympanitic. This error may always be avoided by attention to coexisting physical signs. The sign represents an abnormal accumulation of air within the air-cells. It is, therefore, *par excellence*, the sign of pulmonary emphysema. Its practical value in diagnosis is chiefly in that pathological connection. It occurs, however, in other pathological connections. It is this sign which is obtained above the level of liquid when the quantity is sufficient to fill a third, a half, or even two-thirds of the thoracic space, be the liquid either serous or purulent. It is obtained in cases of pneumonia affecting one lobe of a lung, over the unaffected lobe of the same lung, be the latter either the upper or the lower lobe. I forego discussion of the question, wherefore is the sign present in these two pathological connections, simply stating that I suppose in either instance there is an abnormal accumulation of air and increased tension of the alveolar walls within the lobes which yield the sign.

The vesiculo-tympanitic resonance may be illustrated by means of the human lungs, or those of the calf or sheep, removed from the body; inflated artificially within the limit of a normal inspiration, the resonance represents the normal vesicular. Inflated considerably beyond that limit, the emphysematous condition is produced, and the resonance represents that condition.

There is a liability to error in the non-recognition of this sign in certain cases of pulmonary emphysema; and, consequently, to an unfortunate mistake in diagnosis. As a rule, in emphysema, the upper lobes of both lungs are affected, and the lobe of the left in a greater degree than that of the right lung. Now, under these circumstances, the upper lobe in both lungs yields a vesiculo-tympanitic resonance, but this sign is more marked on the left than on the right side, the difference corresponding to the difference in the degree of emphysema. The error is in regarding the lesser degree of resonance on the right, compared with the greater degree of increased resonance on the left side, as dulness which, taken in connection with the symptoms, would point to a phthisical affection. This error of observation, and consequent mistake in diagnosis, is a not very infrequent occurrence. The relatively lesser degree of resonance on the right side at the summit of the chest, which is supposed to be dulness, is, in fact, a vesiculo-tympanitic resonance, and the intensity is therefore greater than normal. The intensity seems to be diminished because it is relatively less than the still greater intensity on the left side. The error is avoided by attention to the pitch and the quality of the resonance on the two sides. If the disparity in respect of the intensity of resonance be due to a greater amount of emphysema on the left side, the pitch of the sound will be higher on that side than on the right side, and the quality will be distinctly vesiculo-tympanitic. On the other hand, were the disparity due to dulness on the right side, the pitch of sound should be higher on that side than on the left side, and the vesicular quality of the resonance on the left side should be without admixture with a tympanitic quality. A useful practical exercise is to select two patients, one affected moderately with emphysema, and the other with a moderate phthisical affection at the summit of the right lung. In the case of phthisis, the resonance at the summit of the right side of the chest will be less than on the left side, and higher in pitch, the resonance on the left side being vesicular in quality, and lower in pitch. In other words, there is abnormal dulness on the right side. In the case of emphysema, the resonance at the summit of the chest on the right side, as in the other case, will be less intense than on the left side; but the disparity is due, not to a diminished in-

tensity of the resonance on the right side, but to the greater increase of its intensity on the left side; and this increased intensity is accompanied by a vesiculo-tympanitic quality, and a higher pitch than on the right side. That in this case the resonance on the right side is actually increased; in other words, that on the right, as well as on the left side, the resonance is vesiculo-tympanitic, is shown by a comparison of the resonance over the upper with that over the lower lobe. In cases of emphysema, the standard of health, or an approximation thereto, is obtained by percussion over the lower lobes.

ARTIFICIAL ILLUSTRATIONS OF THE SIGNS OBTAINED BY PERCUSSION.

In conclusion, I hope it will not be deemed too trivial a matter for this occasion, nor an unworthy use of the "staff of life," to show how the signs obtained by percussion may be illustrated by imitating, out of the body, simply and roughly, the morbid physical conditions which these signs represent, using for this purpose, chiefly, the bread-loaf. A resonance analogous to the vesicular, as has been stated, may be produced by percussing a loaf of bread. The first of the four abnormal signs, namely, flatness, is easily enough illustrated. Any substance devoid of air suffices for an illustration. If a part of a loaf of bread be immersed in water for a few moments, the interstices become filled, and we have an imitation of pulmonary œdema; over that portion of the loaf there is flatness. If the absorption of water be not sufficient to fill the interstices, there is dulness. A single loaf may thus be made to illustrate flatness, dulness, and the normal resonance. If, for water, a solution of gelatine be substituted, and a part of a loaf be allowed to remain immersed until the gelatine congeals, we obtain a representation of solidification of lung analagous to that in cases of pneumonia. The three above-named signs may in this way be illustrated.

Dulness may be illustrated and compared with an imitation of the normal resonance, by introducing into one-half of a loaf of bread pieces of some solid material. In the present illustration I use sticks of candy. The elevation of the pitch of the dull sound may in this way be shown.

Tympanitic resonance is familiar, of course, from the percussion of the abdomen. The pitch, other things being equal, is higher the smaller the space containing air or gas. Artificially, a bladder, or an India-rubber bag inflated, gives an illustration of a tympanitic resonance. Comparing the resonance of an inflated bag of large size, with the resonance of an inflated lung, the higher pitch of the former may be observed. It is also shown by comparison with resonance from a loaf of bread.

Amphoric and cracked-metal resonance may be illustrated by percussing an India-rubber bulb, such as is used in Davidson's syringe, held down to the ear. It will be seen that the cracked-metal intonation requires a small space with free openings.

Tympanitic resonance within a circumscribed space is shown by removing a portion from the centre of a loaf of bread, leaving only the crust. The resonance over this space may be contrasted with that over the remainder of the loaf. By immersing the loaf for a few moments in water, the tympanitic resonance is brought into contrast with flatness on percussion.

Circumscribed flatness may be shown by filling the space which had given the tympanitic resonance with some solid material. Dough containing no air is a good material for this purpose.

The vesiculo-tympanitic resonance may be artificially illustrated as follows: Take a common loaf of bread. By means of a hollow cylinder remove longitudinal sections in one-half of the loaf. The spaces thus produced yield a tympanitic resonance, and the portions of bread which remain give the vesicular resonance. The vesicular and the tympanitic quality are thus combined with elevation of pitch, the tympanitic quality and the elevation of pitch corresponding to the number of sections removed.

ORIGINAL ARTICLES.

A CASE OF SARCOMATOUS "INFLAMMATORY FUNGOID NEOPLASM."

BY LOUIS A. DUHRING, M.D.,
PROFESSOR OF SKIN DISEASES IN THE UNIVERSITY OF PENNSYLVANIA.

THE following case of this rare and grave disease presented itself at my clinic for diseases of the skin at the University Hospital, on Novemer 14, 1882. The patient was exhibited to the class and the prominent features of the affection pointed out in the course of the lecture. The disease is of such rarity and interest as to entitle the case to a place on record, and I shall therefore, without further preface, briefly describe the most important symptoms. The history (for which I am indebted to Dr. Van Harlingen) states that the man, Charles Coyne by name, is a laborer, fifty-two years of age, and a native of Ireland. He enjoyed good health until he was thirty years old, when he was attacked with eczema of the hands, which gradually invaded the feet and other regions until in a short time almost the whole surface became involved. The eczema was always dry and slightly scaly, and itched severely.

About eight years ago the disease under consideration made its appearance in the form of a pea-sized tubercle situated over the left eyebrow. It was at first the same color as the surrounding normal skin, but afterwards became pale-red, and later somewhat purplish in shade. It, as well as all subsequent lesions, from the beginning, itched violently. It grew gradually, so that by the end of a year it was as large as a hazel-nut, and has since increased to its present size. About a year after the appearance of the tubercle referred to, a similar growth came upon the right eyebrow, which has followed the same course. Later, like formations, symmetrically disposed, manifested themselves behind the ears and the jaws, and several years afterwards they also made their appearance on the chest, and later on other parts of the trunk. On the chest there first appeared a highly inflammatory papular eruption, "resembling prickly heat," which after vanishing was succeeded by the present papular, tubercular, and nodular formations. Latterly, a few of the older lesions have softened and ulcerated superficially, but this tendency is as yet not marked. The hemorrhagic symptoms, seen on some of the patches of the trunk and in places on the extremities, have existed only during the past six months. The general health has been gradually failing, and he has lost weight during the last year. He is now in poor health; is spare and somewhat emaciated, and is weak.

Occupying the eyebrows and forehead are two

perfectly symmetrical, circumscribed, irregularly shaped, lobulated tumors the size of common hen's eggs. They are soft, fleshy, and have a fungoid look, and are of a dusky, dull, pale-red or violaceous color, and have slightly excoriated and scaly, rough surfaces, the result of scratching. They are irregularly ovoidal in shape, and project about an inch beyond the forehead, giving a heavy expression to the face. Upon the surface of either growth there exist several furrows or linear depressions. The color is a dull-red with a purplish tint, —a pale raspberry-red.

Immediately above the tumor on the left side there is a flat, almond-sized and shaped, pale-pinkish formation, which when taken between the fingers is found to be defined in outline and firm in consistence. It is seated in the skin and subcutaneous connective tissue. It illustrates the earliest stage of the tumors

On either side of the head, occupying symmetrically the region in front of and behind the auricles, there exist extensive, highly developed masses of firm infiltration, having the same general character as the tumors of the eyebrows. The disease here extends from the temporal region down to the angles of the lower jaw, and is so pronounced as to cause considerable deformity. Behind the auricles it extends into the scalp as far as the parietal region, and thence on either side to the occipital protuberance. The posterior aspect of the neck is also similarly invaded. The whole mass is considerably raised and is irregularly furrowed, tuberculated, and nodulated, though not to the extent of the prominent tumors, such as those on the face.

In addition to the lesions described, there exist numerous, variously sized, rounded or flat, raised patches of infiltration, of a reddish-purple or brownish-red shade, scattered over the trunk, the most conspicuous of which are seated on the chest. These are five in number, two occupying the region of the nipples, and the others the sternum. They are large and prominent, varying in size from a walnut to an egg, and have a firm, fleshy feel, and a distinctly fungoid appearance. Upon various regions of the trunk, small and large, ill-defined patches of an inflammatory papular eruption (resembling disseminate papular eczema) exist, the seat of violent itching. More or less of this eruption is found over the whole surface, and appears to be eczematous in character, although peculiar in type. The general color of the skin of the trunk is a dusky-red, mottled, and in places violaceous or even bluish (hemorrhagic) in tint.

Upon the arms and forearms are likewise patches of tubercular infiltration, and also of the inflammatory papular manifestation, some of them being distinctly hemorrhagic. Upon the thighs and legs there are no large tumors or nodular formations, but here and there are patches of diffuse and papular infiltration, all of which are markedly hemorrhagic, so much so as to give the picture of purpura. Upon the hard palate, involving the uvula, is an elongate, circumscribed, raised, plate-like patch of infiltration, about half an inch in diameter. The voice is in consequence thick. The cutaneous lesions are all accompanied by intense itching, which is almost constant. The scratch-marks, everywhere visible, attest this statement, and it is chiefly for this symptom that the man now seeks medical advice.

The case represents the same disease that I brought before the American Dermatological Association four years ago, a full report of which case, together with the remarks made by the writer, and by members of the Association, may be found in the *Archives of Dermatology*, January, 1879, and January, 1880, with the provisional title of "inflammatory fungoid neoplasm." The inflammatory nature of the process was more marked in the first case than in the present one, although some of the lesions cannot be interpreted otherwise than as highly inflammatory. We shall find, however, without doubt, in the fully developed tumors the same formation as existed in the first case, viz.: a dense, small, round-cell infiltration involving the cutaneous and subcutaneous tissues, possessing the general features of sarcoma. The disease is liable to be confounded clinically with syphilis and with cancer, although the microscope would at once differentiate it from the latter disease. The prognosis is grave, for although the progress of the disease up to the present time has been slow, it will surely be more rapid within the next few years, and will prove fatal.

On the subject of treatment, I have but little to say. The various anti-pruritic remedies that are found useful in papular eczema, such, for example, as thymol, carbolic acid, and the tarry preparations, will in a measure relieve and control the itching. The larger growths that occasion inconvenience may be removed with the knife, or, where possible, by the galvano-cautery wire, a much better method of operation. The tumors are vascular, and by means of the galvano-cautery the annoyance from hemorrhage is lessened. The wound will probably heal without difficulty, and a recurrence of the growth at the point of the incision need not be feared, this opinion being based on my experience in the other case referred to.

THREE CASES OF DIABETES INSIPIDUS

SUCCESSFULLY TREATED BY ERGOT.

BY C. S. LACY, M.D.,
OF MACEDON, N. Y.

WITH the view of adding further evidence in favor of the value of ergot in the treatment of diabetes insipidus, I desire to record the following cases:

CASE I.—J. S., æt. 18, family history good, and he had previously enjoyed good health, consulted me Sept. 10, 1877, "for some trouble with his kidneys." Some four weeks before he had attended a festival, and indulged in ice cream quite freely, and, as he expressed it, "had not been well since," having passed large quantities of urine ever since, being obliged to get up in the night several times to micturate. Urine very light colored, acid reaction, specific gravity 1005, neither albumen nor sugar. The amount voided during twenty-four hours was 180 ounces. Put him upon valerian four times daily.

Sept. 25.—Passed 220 ounces of urine, specific gravity 1008. He had become very much weakened, pale, and emaciated; loss of appetite; pain in the small of the back. In consultation with Dr. B., determined to try bromide of potassium 15 to 20 grains, three times daily.

Oct. 10.—Urine passed, 250 ounces; no traces of albumen or sugar; face and ankles œdematous; great weakness and prostration, shortness of breath; indigestion, with acid eructations. He and his friends had given up all hopes of his recovery.

In looking over my journals with a view of finding some new "points" upon the treatment of this case, I found in the August number for 1875, of the *Monthly Abstract of Medical Sciences*, Dr. Da Costa's account of a case treated by ergot. The 15th of October I put him upon drachm doses of the fluid extract of ergot, three times daily, and increased to two drachms, three times daily. Its effects were marvellous, there being a steady diminution in the daily amount of urine voided, and a marked improvement in the patient's health. He may be said to have been well the first of January, 1878. There was a steady decrease in the amount of urine from the first giving of the ergot. The amount passed at the time I began giving the ergot, Oct. 15th, 240 ounces; Oct. 18th, 195 ounces; Oct. 25th, 130 ounces; Nov. 2d, 100; from this time to the 1st of Jan. the highest amount passed was 80 ounces; Nov. 20th, and from the time I ceased treating him, Jan. 1st, 1878, to the present time, he has been a well man, and, as over four years have elapsed, I think we are warranted in claiming for ergot the credit of the cure.

The history of the other two cases which I have to relate only confirm the efficacy of ergot in the treatment of diabetes insipidus.

CASE II.—Young man, 23 years of age, farmer, of good family history; had been troubled two months when he consulted me. June 15, 1879, he passed on an average 160 ounces of urine daily, slightly acid in its reaction; specific gravity, 1003; no traces of albumen; no sugar. He said that he first noticed the trouble after some heavy work—plowing, etc.; troubled with indigestion; bowels constipated; no disease of heart, lungs, or other organs; temperature normal; and he complained of nothing but a "tired feeling," being very much prostrated; pale and emaciated, having lost some twenty-five pounds in weight during the two months. The amount of urine voided corresponded nearly with the amount of fluids taken. Ordered him to take drachm doses of the fluid extract of ergot four times daily, and gradually increased the quantity to two drachms three times daily. Much improved in a few days. Not obliged to get up at nights to micturate; and, as he expressed it, "felt like a new man." Upon the fifteenth day of treatment the amount of urine passed was 80 ounces; thirtieth day, normal; and from the day I ceased treating him, the 20th of August, 1879, to the present time, he has been a strong, robust man.

CASE III.—J. R., a boy, some twelve years of age. His mother has asthma; otherwise the family history is good; and up to the time of my treating him, March 10, 1880, he had been a very healthy child. His parents had noticed for some time that he passed more urine than seemed natural, having to get up during the night several times to micturate; was becoming pale and emaciated; no life or ambition; complained of weakness in back, loss of appetite, etc. His parents attributed his condition to his growing rapidly; but, finding he did not improve, brought him to me. There was no disease of any of the organs. He passed from eight to ten pints of urine daily, which far exceeded the amount of fluids taken. Specific gravity, 1005. He being very fond of milk, I put him upon a milk diet almost exclusively; gave him ergot, half drachm, four times daily; increased to one dracm; also gave cod-liver oil three times daily; very much improved at the end of the tenth day; did not have to get up during the night; and the amount of urine passed was four pints; and from that time until the middle of May, 1880, he improved. Urine normal; appetite good; gained in flesh, so that he did not look at all like the pale, puny boy that first visited me. He has enjoyed good health up to the present time, with the exception of a severe attack of dysentery, in the fall of 1881, from which he made a good recovery.

I think these three cases will go far to establish the claims of Dr. Da Costa for ergot. In the treatment of diabetes insipidus, like him, I do not contend that it will always cure, but that it merits the fullest confidence in this disease.

HOSPITAL NOTES.

BOSTON CITY HOSPITAL.

(Service of W. C. B. FIFIELD, M D.)

SCIATICA CURED BY STRETCHING THE SCIATIC NERVE.

(Reported by ROYAL WHITMAN, M.D., House Surgeon.)

THE patient, a native of Boston, 39 years of age, entered the hospital October 19, 1882. His history was as follows:

His first attack of sciatica occurred in 1872, and was induced, he thinks, by exposure to wet while working at his trade, that of a piano polisher. Each winter since this time, he has been confined to the house from three to six weeks with attacks of sciatica in the right leg, which have gradually increased in severity. Last July he had an attack of unusual severity, for which he entered the medical side of the hospital. At this time he could not fully extend the leg on account of the stiffness and pain, and was obliged to walk in a stooping position. He remained at the hospital for six weeks, and was then discharged partially relieved, on crutches. He remained at home for five weeks, and then re-entered the hospital. At this time he was unable to dress himself on account of the extreme pain in the leg and stiffness in the back. He remained seven weeks, and was then discharged partially relieved. He continued in about the same condition during the summer, being unable to walk without crutches.

He was then treated at the out-patients' department of the Massachusetts General Hospital, where ether was given, and an attempt made to stretch the nerve by forcibly flexing the leg upon the body. This was, however, followed by no relief, and the operation of

stretching the nerve was advised, and he accordingly entered the hospital. At this time his pain was intense, and the patient, as he expressed it, "longed to have a knife put into his leg." On the following morning ether was given, and Dr. Fifield made an incision six inches in length, commencing at a point two inches below the tuberosity of the ischium, over the biceps muscle. This muscle, with the semitendinosus, was drawn to the outside, and the nerve was exposed. A sound was then passed beneath it, and it was pulled three times with sufficient force to lift the leg from the table. There was no hemorrhage. The wound was united with deep silver sutures. The operation was done under spray, and occupied but a few moments.

Upon the following day the course of the sciatic and its larger branches could be traced by lines of ecchymoses under the skin. The wound healed rapidly, and the patient was discharged well on the nineteenth day after the operation. There has been no pain or stiffness since; and the only abnormal sensation noticed was a slight numbness in the calf of the leg.

MEDICAL PROGRESS.

NERVE-STRETCHING IN LOCOMOTOR ATAXY.—In the *Revue de Médecine* (Nos. 10 and 11) there is a critical review of the results of nerve-stretching in locomotor ataxy and other diseases of the spinal cord With the latter class of cases we have at present nothing to do, but we think the results of inquiry into the former class of cases ought to be made known. In the review mention is made of 54 cases, published in various parts of the world, where the sciatic nerve was stretched for locomotor ataxy. Of these no fewer than 6 died, and in 3 cases the death was directly attributable to the operation. In 19 instances the patient derived no benefit whatever from the operation. In 18 instances there was either alleviation of one or more symptoms or some temporary benefit, or there was immediate benefit from the operation but the ultimate result was not known. In the remaining 11 cases a lasting improvement was noted. Thus the outcome of this inquiry is that in about 54 per cent. of the cases the operation was followed by permanent or temporary benefit, and in 46 per cent. no good resulted from the operation, death ensuing in 11 per cent. of the cases. We must note the fact that in one instance Langenbuch had twice performed this operation with some benefit when the patient died after the third operation, and Westphal found the spinal cord perfectly healthy. This certainly was not the case in any of the fatal cases referred to above, but we can not help feeling that there is a possibility that some of these successful cases were not really cases of disease of the spinal cord at all. The operation is one which has not found much favor in this country, and in London it has found very few advocates indeed. We think the statistics we have given above will not tend to increase the favor of the operation in the eyes of those who make the welfare of their patients their first consideration.—*Medical Times and Gazette*, December 2, 1882.

CARDIAC FORM OF TYPHOID FEVER.—PROF. BERNHEIM, of Nancy (*Lyon Méd*, Oct. 8, 1882) read a paper before the French Association on this subject. He distinguishes between the cardiac form proper, as he calls it, and those other forms of typhoid in which the symptoms of cardiac disease are simulated, or in which disturbances of the pulmonary circulation are manifested His cardiac form is marked by an acceleration of the heart's rhythm, without any organic lesion. The increased frequency of the pulse is not accompanied by any proportionate elevation of temperature. The symptoms appear at the beginning of the attack, and are due to a toxic action of the typhoid poison on the motor centres of the heart itself. It is a rare form. Bernheim has only met with six instances among 250 cases. On the other hand, it is a very grave form. No advantage is obtained by administering stimulants like alcohol and ether, and the use of digitalis is dangerous.—*Practitioner*, December, 1882.

TRICUSPID CARDIAC MURMURS HEARD AT THE APEX.—DR. DUROZIEZ has studied a number of cases in which there were tricuspid murmurs, and states that ordinarily tricuspid murmurs can be heard over all the surface of the right ventricle, that is to say, over all the anterior surface of the heart. The points of maximum intensity vary, sometimes being below the sternum, sometimes at its inferior border, and sometimes at the apex. When only heard at the apex, they are often wrongly attributed to the mitral valve; the latter murmurs, however, are also to be heard in the axilla and in the back, while the tricuspid murmur is never to be heard to the left of the apex, in the axilla, or in the back.

Since the right ventricle, equally with the left, contributes to the formation of the apex, there is nothing to prevent tricuspid murmurs being audible at this point. A tricuspid murmur may exist without a venous pulse, and *vice versa*. A humming murmur is more frequently tricuspid than mitral, and indicates a very narrow insufficiency and energetic ventricle.—*L'Union Médicale*, November 26, 1882.

TRACHOMA.—At the recent meeting of the Ophthalmological Congress at Heidelberg, PROF. SATTLER made a communication upon the origin of trachoma, which he believes to be caused by micro-organisms. His more recent experiments have fully borne out the results he obtained in 1881, which were read before the Heidelberg Congress in September of that year. He has again succeeded in cultivating the micrococci, and producing positive results by inoculation. The organisms are circular, are never seen with zoöglæa, but always singly or in pairs, separated by a small interspace. Inoculation of the third generation of a cultivation produced trachoma in the human conjunctiva. These micrococci alone produce trachoma; all other substances used failed to do so.

In the discussion which followed, Baumeister and Kerschbaumer advocated the use of iodoform in contagious conjunctival affections. Samelsohn remarked that he had seen the bacillus of tubercle in tuberculosis of the iris, and Leber that he always now finds micrococci in hypopyon keratitis.—*Ophthalmic Review*, December, 1882.

SYPHILITIC ENLARGEMENT OF TONSILS.—An abstract of the conclusions of DR. PAUL HAMONIC is to be found in the *Deutsche Med. Zeitung*, No. 45. Hamonic distinguishes, during the secondary stage of syphilis—1. *Simple hypertrophy*, which is analogous to the swelling of lymphatic glands, is tardy in its development, and, as it occasions no symptoms, is often overlooked. Both tonsils are almost always affected, though to a different degree. The enlargement takes place forwards, bulging the anterior pillar of the fauces, and rarely gives rise to deafness. The tonsils are hard and somewhat elastic; the normal depressions on their surfaces are exaggerated. The uvula tends to go over to the larger tonsil. Sometimes the tonsil may be reduced in size by anti-syphilitic treatment. 2. *Hypertrophy associated with angina.* In this there is not so much fever as in ordinary acute angina; the duration is variable, and relapses are very liable to happen. 3. *Hypertrophy complicated with syphilides.* Most fre-

quently the syphilide appears on the tonsil and the anterior pillar of the fauces. When syphilis affects a previously scrofulous tonsil the enlargement is very great, of pale color, often spongy and with large crypts, there is considerable pain, the voice becomes nasal, and the hearing, taste, and smell are altered. The course is generally chronic, and there is a great tendency to recurrence. Ordinary tonsillitis and sore throat may supervene even when the tonsils are syphilitically enlarged, but then, though peritonsillar suppuration may occur, it would appear that the tonsil itself never suppurates. Hamonic states that there is no objection to excision of the syphilitic tonsils if they be very large. —*Medical Times and Gazette*, December 2, 1882.

GASTROTOMY IN EXTRA-UTERINE PREGNANCY.—DR. N. PHENOMENON (*Arch. de Tocologie*) reports the case of a peasant woman 22 years of age, who illustrated this accident. She began to menstruate at seventeen years of age, and this function was always performed regularly and normally. She married at eighteen years of age and continued in good health: she came to the author's clinic in January, 1881. Twenty-two months previous to that time the menses first failed to appear. The customary symptoms of pregnancy followed, even to the perception of fœtal movements. Before the expiration of the customary nine months of gestation, the fœtal movements became more feeble, she experienced severe pains in the kidneys and in the lower part of the abdomen, and occasional paroxysms of fever. The time for delivery arrived, but no labor-pains appeared. The abdomen continued to increase in size for a month or two longer, and then remained *in statu quo*. During the first three-fourths of the year which followed she had occasional attacks of fever and in the intervals was able to attend to her household duties and even to work in the field. Then an abscess formed and pointed at the navel, and a quantity of pus was discharged. Extreme weakness followed, and in this condition she appeared at the author's clinic. The tumor presented the following characteristics: 1st. Its contour was very well defined. 2d. It was solid. 3d. It crepitated upon palpation. 4th. It was painful to the touch. 5th. It was immovable, but was not attached to the abdominal walls. A fistula existed at the navel, from which pus exuded. The diagnosis made was that of abdominal pregnancy. The abdomen was opened by M. Horwitz, and the cyst was found to have no adhesions anteriorly of any extent. The putrefied fœtus was removed, and the cyst, which was firmly fixed at its sides, was secured by the sutures which closed the abdominal wound. The operation was performed with antiseptic precautions, and the patient made a good recovery.

As deductions from this case the author observes: 1st. If the pregnancy continues through the customary period without mishap, there is no occasion for interference, providing always that watchfulness against accidents is to be observed. This is contrary to the opinion of Güsserow, who advises operation at the beginning of the eighth month. 2d. In case of the occurrence of some grave, complicating accident, equally dangerous for the fœtus and for the mother, as, for example, rupture of the fœtal sac, or internal hemorrhage, gastrotomy is indicated to be performed at once. This is contrary to Spiegelberg's experience and advice, and Parry estimates that seventy per cent. of the mothers die after such operations. The author replies that statistics are not reliable, for the cases are never identical where the operation has been performed. 3d. If the normal period of pregnancy has passed, the fœtus has died, and the case is presented to us for decision, the course of action must vary in accordance with the pathological process, which differs in every case. Two issues are customary with such pregnancies, petrification or the conversion of the fœtus into calcareous material, and a slow process of suppuration by means of which the contents of the fœtal sac are discharged through fistulous openings. The former is the more desirable end, for it does not tax the vital resources as the latter does. The author does not believe in waiting for the formation of a fistula before operating, especially when the cyst is near the abdominal wall. One must always remember the grave complications which are possible if the cyst is allowed to suppurate. Of the active or the passive modes of treatment, then, the author is decidedly in favor of the former.—*Amer. Journ. of Obstetrics*, December, 1882.

THE DIAGNOSIS OF PULMONARY SYPHILIS.—In the *Wiener Medizinische Wochenschrift*, No. 46, an abstract of an alleged case of pulmonary syphilis may be found recorded by DR. GUNTZ. The previous history of the man showed that two years after infection an eruption appeared on the skin, and a year later cutaneous ulceration was noted; five years after infection the lung trouble was first noticed. The left lower lobe was affected with a circumscribed infiltration, the symptoms being cough and shivering. The dulness to percussion had not disappeared after a period of eighteen months' good general health, at the end of which the patient began to spit blood. This was soon followed by an increase in the size of the infiltrated area. For six days the expectoration consisted of chocolate-brown lumps; later, muco-purulent sputa were brought up. The pulse was 90; the breathing 26 to 32 per minute; but there was no fever. The physical signs underwent no appreciable change; there were dulness and pectoriloquy with some râles. The sputa were hardened in alcohol, and had become tough and membranous—some, nevertheless, were lighter than water. The microscope revealed a fibrillated stroma, with finely granular *débris*, old and young cells and nuclei, here irregularly scattered, there arranged in groups. No pulmonary tissue or vessels were detected. Some sputa were sent to Lancereaux, who also regarded the microscopic elements as of a gummatous nature.—*Medical Times and Gazette*, December 9, 1882.

HYPODERMIC INJECTIONS OF BLOOD IN GASTRIC ULCER.—PROF. BERNUTZ (*Gaz. des Hôp.*, 64, 1882) has successfully treated two patients suffering from simple gastric ulcer with subcutaneous injections of blood. They were both much reduced, owing to incessant vomiting, everything swallowed being at once rejected. The blood, taken from the femoral artery of a large dog, was received in a warm vessel, and at once injected by means of a warmed Dieulafoy syringe. In the first case the blood was promptly absorbed, and sufficed to keep up the strength for two days. As the patient grew strong the vomiting ceased, and milk diet was resumed. Gradually the appetite improved and food of all kinds was well borne and digested. Fowl's blood was once tried, but its good effects seemed less lasting. The second case was similar, but the patient here was even farther gone through simple inanition. Here the first injection was not absorbed, and a phlegmonous inflammation started from the injection wound and spread over the arm. The gastric difficulties seemed however to decline as the inflammation of the arm advanced. The obstinate vomiting ceased, and with it the gastric pain; so that the patient was presently able to enjoy the ordinary hospital diet. In this instance the blood could have little if any nutritive value, as it was not absorbed. Prof. Bernutz is inclined to think the severe local inflammation in the arm may have acted beneficially in some reflex way on the gastric lesion.—*Practitioner*, December, 1882.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Editor's Address, No. 1004 Walnut St., Philadelphia.

SUBSCRIPTION PRICE, INCLUDING POSTAGE,

PER ANNUM, IN ADVANCE, ... $5.00.
SINGLE COPIES, ... 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address, HENRY C. LEA'S SON & CO.,
NOS. 706 & 708 SANSOM STREET,
PHILADELPHIA, PA.

SATURDAY, JANUARY 6, 1883.

THE TREATMENT OF SYMPTOMS INDICATING DANGER IN THE ANÆSTHETIC STATE.

THE anæsthetic state is a condition of danger. It means the suspension of the functions of animal life, the organic functions, especially respiration and circulation, continuing. This primal fact, then, indicates the danger to be provided against. *Cæteris paribus*, chloroform endangers the circulation; ether the respiration. The measures of prevention, as well as the remedies, must be directed accordingly. This law is not absolute in its application. Sometimes chloroform paralyzes the respiratory centre; rarely ether paralyzes the heart. However, so uniformly is the rule applicable, that the injunction in administering chloroform is to watch the pulse, and in giving ether to watch the respiration. Disregarding, for the present, exceptional conditions, the treatment of dangerous symptoms in the anæsthetic state resolves itself into the administration of remedies to prevent or relieve the tendency to cardiac paralysis on the one hand, or to respiratory failure on the other.

The first prophylactic measure on which we insist is the relinquishment of chloroform as the ordinary anæsthetic. We do not deny that there may be special conditions justifying the use of chloroform; it may be necessary when operations are to be performed by the light of an ordinary candle or lamp, since ether vapor forms with atmospheric air an explosive mixture; it may be preferable in obstetric practice, as the anæsthetic agent to assuage the pains of labor, and for various obstetrical operations. With these limitations, the rule of practice should be to employ ether to induce the anæsthetic state under the conditions ordinarily requiring it. The next prophylactic measure consists in the use of morphine subcutaneously—before beginning the inhalation, according to Bernard; after the inhalation has proceeded far enough to induce analgesia, according to Nussbaum. The method of Bernard seems to us the better, because the effect of morphine prevents the sudden failure of the heart sometimes induced by a few whiffs of chloroform vapor, facilitates the inhalation by lessening the irritability of the air-passages, and diminishes or prevents the stage of tetanic rigidity, with its stertorous breathing and cyanosis. We do not pretend to affirm that this method of "mixed anæsthesia," as it has been entitled, has received the unanimous assent of surgeons; but our belief is that the experience thus far accumulated is largely in favor of its utility, and we have the high authority of Dr. J. C. Reeve in its support.

To avoid accident, it is in the highest degree important to ascertain the condition of the subject to be anæsthetized. The habits of life, the absence of cerebral, of pulmonary, and of cardiac diseases of a nature experience has proved to contra-indicate the use of anæsthetic agents, should be ascertained before beginning the inhalation. This survey and scrutiny of the patient should not be limited to a casual examination of the organs supposed to be concerned—it is usually satisfied by a superficial examination of the chest; but it should be made a thorough investigation of the life history in its pathological aspects, as well as a minute study of the somatic state at the time.

We have already, in our comments on fatal cases, alluded to the faults of administration which have been responsible in a large degree for the accidents. It would be a waste of our space and of our readers' patience to reiterate those points already set forth with sufficient particularity in respect to the mode in which anæsthetic vapors should be inhaled. The treatment of the danger-symptoms may, however, require a further exposition of our views. As these danger-symptoms are divisible into causes of cardiac paralysis and causes of respiratory failure, we have thus a natural classification for the arrangement of the data. The quickest mode of dying is by arrest of the heart's action. Unfortunately, in a large proportion of cases, the heart is incapable of further action when its embarrassment is ascertained, and hence the wisest measures may be futile. We must, in advance of the expression of our own views, protest against a practice which has become too common: namely, the subcutaneous injection of digitalis. If this agent acts rapidly enough to affect the circulation, the result must be disastrous, since it induces such a rise in the arterial tension as to im-

pose additional work on the heart. A remedy acting in the opposite way—to lower the tension at the periphery and thus diminish the resistance to the propelling power of the heart—seems, *a priori*, to be more suitable, and experience confirms this theoretical view. The subcutaneous injection of amyl nitrite has appeared to be of immense service in some cases of threatened cardiac paralysis. From three to five minims are injected beneath the skin at any point, or, if respiration is going on, the effect can be more speedily procured by inhalation. The good effect consists in the diminution of the peripheral pressure, which permits the heart to distribute the blood more easily, and thus to supply more quickly and fully the centres of organic life.

The intravenous injection of ammonia is, also, a promising expedient to arouse the heart. The Australian experience with this practice has abundantly proved that the intravenous implantation of one drachm of aqua ammoniæ, diluted with two drachms of water, is perfectly safe, and a powerful cardiac stimulant. The time for its administration is when the action of the heart has become weak and fluttering and a stoppage imminent. Any convenient vein may be selected; the needle of the hypodermatic syringe is thrust directly into it, and the ammoniacal solution is promptly, but without violence, delivered in the blood stream. A half-drachm should be administered at a time, the repetition of it being governed by the effect.

Another agent having decided power to increase the heart's movements is atropine. Although this may not act as speedily as the intravenous injection of ammonia, it is next in respect to promptness of effect. As a rule, however, it is preferable to administer atropine in combination with morphine before beginning the inhalation of the anæsthetic vapor.

Acupuncture and electro-puncture of the heart have also been suggested, and, indeed, used in some cases, but after a careful survey of the whole ground we are forced to the conclusion that these expedients are rather injurious than beneficial. To puncture the heart—especially to send a faradic current through a needle inserted into its substance—must cause a more or less severe shock. All the world knows the effect of shock on the cardiac movements. Can such manipulation fail to depress the heart's functions? Again, the exact position of the perforating needle should be known, since the inhibiting ganglia may be stimulated rather than the motor. To stimulate the former, is to stop a heart which is in action.

When the failure is respiratory—the chief danger in ether inhalation—the respiratory centre should be supplied with blood as quickly as possible. The method of Nélaton, of inversion of the body, accomplishes this. The tongue falling back in the throat forces down the epiglottis, and the violent inspiratory efforts increase the danger by converting the epiglottis into a valve. Hence, to draw out the tongue strongly is a most necessary expedient for freeing the entrance to the larynx. It accomplishes more. The strong traction on the basal attachments of the tongue exerts a reflex effect on the respiratory centre, and this, according to some, is the chief use of the practice. Faradization of the chest muscles, inhalation of ammonia, irritation of the Schneiderian mucous membrane by a bit of paper dipped in aqua ammoniæ, are the means resorted to for reflex stimulation of the respiratory centre. Dashing cold water over the chest exposed to cold air from an open window is one of those doubtful measures often resorted to in the excitement of the moment, but which, of little use at the time, is apt to be followed by bronchitis or pneumonia.

Certain stimulants of the respiratory centre may be employed subcutaneously. These are atropine and strychnine—the former generally preferable, because more prompt. The alcoholic stimulants so often used hypodermatically are of doubtful utility, although apparently beneficial in some cases. As ether and chloroform are derivatives of alcohol and act in a similar manner on the centres of organic life, to administer the latter as a remedy for depression or arrest of function produced by the former seems to be an irrational procedure, and may, indeed, in any doubtful case, determine the result unfavorably, but the counter-irritant effect of the injection may, however, possibly exercise a favorable influence.

SYMMETRICAL GANGRENE OF THE EXTREMITIES, WITH ALBUMINURIA.

AT a recent meeting, Oct. 27th, of the Medical Society of Hospitals in Paris, M. ROQUES reported a case of symmetrical gangrene of the hands and feet, accompanied by albuminuria, in a woman who was also the subject of intense congestion of the right lung and dyspnœa. To these symptoms were added enlarged liver, irregular and strong cardiac impulse, and dimness of vision, but there was no retinitis albuminurica. For three months she had at times experienced a decided sensation of coldness of the surface of the hands, the fingers becoming pale and apparently dead; three days before admission the same phenomena appeared on the surface of the great toe of the right foot, and four days later on the same toe of the left foot. The skin of these toes presented a purplish hue, which disappeared upon pressure, returning slowly upon its removal; they were cold, painful, and deficient in tactile sense. There were also on the dorsal surface of the feet, and on the external surface of

the leg and thigh, irregularly mottled patches, but no trace of œdema. These lesions were absolutely symmetrical but more marked upon the left side. There was an evident but feeble pulsation in the two pedal arteries. In the upper extremities the same conditions were present: all the fingers, except the thumb, were cold, insensitive, and purple; the right ear was dry and shrivelled; the hands and arms were mottled with livid patches. Some days later the little finger of the right hand and the right great toe became entirely sphacelated. At times the heat returned in the extremities, the livid patches disappeared and the sensibility returned, but a fresh attack of the "local asphyxia" repeated the same phenomena. The dyspnœa and irregularity of the heart increased, and she died twenty-eight days after admission. At the autopsy there were found splenization of the right lung, hypertrophy of the heart, a circle of soft villous vegetations on the aortic valves, but no mitral disease. There was a nutmeg liver, the spleen was healthy, and the kidneys were the seat of marked interstitial nephritis. *There was no atheroma of the pedal or radial arteries.*

The question naturally arises, Can there be any causal relation between these two conditions? Raynaud and Débove have noted albuminuria in several cases of symmetrical gangrene, and there have been observed in Bright's disease certain phenomena which are apparently due to vaso-motor influences, such as the localized œdemas which come and go suddenly and seem to be associated sometimes with traumatic nephritis of one kidney; such also are the phenomena of the "dead finger" and varied forms of pruritus recently noted by Dieulafoy. M. Roques is inclined to believe that the union of these two conditions is a coincidence, but admits that further observations are required. Such would indeed seem to be the only inference which can be drawn.

DR. M. WEISS of Prague, has recently published in the *Wiener Klinik*, a very interesting monograph on symmetrical gangrene, in which he collates seventeen cases, including a very carefully studied one of his own. The first of these cases was recorded in 1729, the last in 1882, so that it will be seen to be a very rare disease. It is defined by him as an affection of the central nervous system, characterized clinically by numerous vaso-motor, trophic, motor, sensory, and special sense derangements, while it receives its distinctive stamp from a symmetrically occurring gangrene of parts of the hands and feet (phalanges), and more seldom of other parts of the body. The term "symmetrical gangrene" was originally applied to the condition by Raynaud, who first described it in 1862; and although from the fact that the term recognizes but a single, yet the most striking, symptom, Weiss considers the title "neurotic gangrene" more appropriate, he retains Raynaud's title.

That the case described by M. Roques is one which may be properly included in the category of symmetrical gangrene we are by no means certain. In the first place, the disease seems not to have been usually fatal as in the present instance, but is paroxysmal, the paroxysms beginning with pain, which is often extreme, in circumscribed spots on the affected extremities. This is succeeded by a gangrene which may be superficial or may involve an entire phalanx; the separation of the slough being succeeded by a repair which is proportional to the destruction. Along with this are numerous other local and general derangements which we have no space to detail. Such a paroxysm is succeeded by others at intervals of a month or more, in some instances coinciding with the menstrual period. The immediate cause of the gangrene must, however, be the same in each instance. The symmetrical character of the process excludes the usual local causes of gangrene, such as obliteration or obstruction of afferent vessels, embolism, mechanical, chemical or thermic agents, etc., and there was no atheroma or ergotism; so that there remains only the effect of a weak heart or some one of the trophic influences which can alone account for symmetrical gangrene; and a heart so feeble as to be the cause of symmetrical gangrene in the extremities is scarcely likely to be present in a woman of 41, even if there be aortic obstruction, as may have been the case here. From such trophic influences must also be excluded vaso-motor spasm, because striking as are the functional results of such arterial contraction in experiments on animals, gangrene has never been produced by irritation or stimulus of vaso-constrictor nerves. They must, therefore, be trophic in the strictest sense of the term. Now no such slowly operating trophic influences have ever been known to exist in interstitial nephritis, or in any form of Bright's disease, and we, therefore, conclude that the association of the two conditions is a purely accidental one.

FETID BRONCHITIS, AND ITS TREATMENT BY THE HYPOSULPHITE OF SODIUM.

UNDER the above title, DR. E. LANCEREAUX, in a recent issue of the *Bulletin de Thérapeutique*, treats of fetid bronchitis chiefly from the therapeutical point of view. The real causes of the malady are not fully understood. Dilatation of the bronchial tubes, and accumulation in the depôts thus formed, of the muco-purulent secretion, is probably the first step, decomposition of the muco-pus under the agency of atmospherical germs being then produced. Butyric and valerianic acids are amongst the odorous substances thus formed. Dr. Lancereaux regards this a most fatal malady—an opinion

in which all experienced physicians will concur. It is well known that the lesions are not limited to the bronchi, but extend to the peri-bronchial connective tissue, and to the pulmonary parenchyma ultimately. So fatal is it, that all of the subjects of this disease admitted to *la Pitiê*, died, when treated in the orthodox way, with alcohol and quinine. Far different has been the result, when treated with hyposulphite of sodium. His observations are based on twenty cases—fourteen treated by the old method—which proved fatal, and six treated by the hyposulphite, all of which recovered. He gives the details of the latter.

The mode of administering the remedy is very simple. It consists in giving 4 to 5 grammes (about 62 to 80 grains) in an ordinary solution daily for a month to six weeks, after which the amount used will be determined by the conditions present. The digestive functions are improved rather than embarrassed, and no derangements of any kind are to be referred to its action. It does not produce the desired result immediately, but several days, often a week, will elapse before the curative results are manifest. The first effect of a therapeutical kind observed is a diminution in the odor of the sweat and of the muco-pus brought up from the bronchi. The amount of the secretion diminishes, and its character changes, becoming more distinctly mucous and viscid. Following this lessening of the expectoration and disappearance of its fetidity, the appetite improves and the weight lost by the continuance of the disease is regained, and the bodily forces are restored to their wonted activity. The time required to effect these marvellous results varies somewhat, but the rule appears to be that in from six weeks to three months the changes in the condition of these subjects, above described, will have taken place. Sometimes, it is true, in the course of the treatment, there may be a return of the fetidity, but it will be brief, and the evil odor will gradually disappear and permanently.

How is the cure of these cases effected? is the inquiry made by Dr. Lancereaux. There can be, at present, no correct answer made to this question. To offer a satisfactory solution of the problem, it will be necessary to know what changes the alkaline hyposulphites undergo in the system, and the mode of their elimination. To effect the cure of such a condition, they must act, not only on the process of decomposition in the muco-pus, but on the organic changes to which the pathological exudate owes its origin. It is, however, of comparatively inferior consequence how the medicament acts.

Does it cure? If so, we are put in possession of a most valuable agent, able to cure a malady hitherto beyond the resources of art. We need now further clinical experience. If Dr. Lancereaux's observations are confirmed by others, if new facts of corresponding significance are brought forward, we may safely postpone the consideration of the *modus operandi* to a more convenient season.

IN the December number of the Brooklyn *Annals of Anatomy and Surgery* the editors indulge in some personal reflections not inappropriate to the successful close of the third year of its publication.

The *Annals* began as a modest record of the work of the young but vigorous Anatomical and Surgical Society of Brooklyn, whose example we commend most heartily to other less enterprising communities. But it has now, as it were, cut the umbilical cord, and becomes an entirely independent journal, for which the editors alone will be responsible.

The announcement for 1883 is very attractive in the list of names of those from whom papers are expected, and Dr. Geo. J. Fisher, we are glad to see, will continue his delightful and scholarly sketches of the "old masters." We notice with pleasure, also, that the proceedings of the New York Surgical Society will appear in the *Annals* as well as in THE NEWS. This cosmopolitan publication of their proceedings by the various medical societies, we are happy to observe, is becoming very common. Certainly it bears good fruit in the stimulus to writers, who find that their papers appear promptly, and that their circle of readers is increased tenfold. By the ancient method they quietly slept for weeks or months till the "Proceedings" appeared in the glory of a bound volume—which, in most instances, was immediately put upon the shelf—or were seen solely by the readers of the local journal that had the exclusive right to their publication.

THE New York State Board of Health has officially declared: "That the use of privy-vaults, privy-pits, and cesspools, is seriously affecting the public health;" and further, "That all excreta should be removed from the neighborhood of human dwellings, instead of being stored up near them in pits, vaults, or pools, to poison the water, earth, and air." In some European cities the abandonment of the old cesspool system has already been accomplished, and in others the measure is being seriously contemplated. A Commission of Inquiry is now endeavoring to solve the problem of providing Paris with a system of sewerage which shall take the place of the older plan, in which the excreta are detained in permanent cesspools, generally under the houses, and the more modern system in which movable reservoirs are made use of for catching the solids while the liquids escape into the sewer. Dr. E. Vallin, Professor of Hygiene at Val de Grâce, says that every one is agreed, at least in principle, upon one point,

namely, that permanent cesspools, as forming a structural portion of dwelling-houses, should be superseded. The question upon which there is still a difference of opinion, relates to the choice in the modifications of the water-carriage system which is to form the substitute. In this country this much-needed reform is likewise being agitated, and its accomplishment is only a question of time.

PROFS. SCHUTZ and LOEFFLER have just succeeded, we learn from the *Deutsche Medicinische Wochenschrift* for Dec. 16, in isolating a micro-organism in subjects affected with farcy; they have succeeded in growing several generations in culture fluids, and in transmitting the disease by inoculation to healthy horses. The details of this discovery, which has just been made in the *Kaiserlich Deutsche Gesundheits Amt*, in Berlin, have not yet been published.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting December 12, 1882.

THE PRESIDENT, DR. T. M. MARKOE, IN THE CHAIR.

EMPYEMA; PERFORATION OF THE BRONCHI AND DIAPHRAGM; RECOVERY.

DR. F. LANGE presented a male patient, 19 years of age, with the following history. He was a healthy member of a healthy family, and a student. After repeated attacks of gastric disturbance in the summer of 1881, he was taken, September 2, with severe gastro-intestinal catarrh, which became so obstinate that he was confined to the bed from the eighth to the fifteenth of that month, and was under the care of Dr. Henkel. He had only a moderate fever, but gradually lost flesh and strength. Very soon after this, a deep-seated abscess developed in the inner aspect of the arm, and it seemed to take its origin in the muscular substance of the biceps. Dr. Lange opened the abscess in the presence of Dr. Henkel on the 26th of September, and the wound healed without further trouble, but the patient did not rally entirely. On the 7th of October he was taken quite suddenly with severe pain in the lower part of the thorax on the right side, and went to bed again. Very soon afterwards the physical signs of pleuritic effusion became apparent, and, in a comparatively short time, the level of the fluid was as high as the middle of the scapula. The presence of crepitus and near bronchial breathing above the line of dulness made it probable that the inflammatory process, to some extent, affected the lung tissue. The area of dulness was considerably smaller in the axillary region than behind, and was almost absent in front. There was continued fever with exacerbations at night, and the patient had no appetite and lost flesh and strength rapidly.

On the night of the 19th of October, perforation of the bronchi occurred and large quantities of pus were expectorated. On the following day the patient felt much relieved, although he was very exhausted. Dr. Henkel then found the physical signs of pyo-pneumothorax, especially the metallic sounds. The patient did not rally as had been expected, the fever did not cease, and the debility increased. It was impossible to make a thorough examination of the chest on account of the extreme weakness of the patient, but it was ascertained that the respiratory murmur could be heard from above, downwards to the fourth intercostal space in front, and to the middle of the scapula behind. At the latter point the breathing was amphoric in character. The level of the fluid was considerably lower down; succussion sound could be obtained distinctly. Dr. Lange saw the patient again in consultation, on the 23d of October, and from the history of the case felt certain that there was pus in the pleural cavity, but aspiration gave a negative result. Puncture was made at four different places, but only a few drops of blood mixed with air were obtained. Assuming that the collection of pus might be near the centre of the lung, deep punctures were made. Dr. Lange had already determined to desist from further surgical interference, when he discovered at the lowest part of the thorax, toward the lumbar region and against the lateral border of the sacro-lumbalis, air under his fingers on pressure upon the deep tissues. He punctured at that point, found pus, and then opened the cavity by a free incision. There was an abscess below the diaphragm, along the under surface of which the finger could be passed after being introduced through the incision. Apparently the empyema had perforated the diaphragm. The expectoration very soon ceased, and the patient made a rapid recovery. With the exception of slight retraction of the lower and front part of the right side of the chest, with diminished respiratory murmur in that region, there was scarcely any difference to be noticed when the two sides were compared. Dr. Lange thought that the point at which perforation of the diaphragm occurred was possibly at the gap between the vertebral and costal part of that muscle, which is sometimes very large. He was unable to make out whether the abscess was intra- or extra-peritoneal, but thought it was probably the latter. The kidney, on account of swelling and infiltration of tissues around it, could not be felt distinctly. The outline of the liver was recognizable by palpation. Last summer, Dr. Lange was shown, at Professor Thiersch's clinic in Leipzig, a patient who had sought admission because of a freely discharging fistula over the anterior aspect of the right femur. The etiology of the abscess became apparent when purulent expectoration began simultaneously with the cessation of discharge of pus from the fistula. The patient stated that this had occurred several times, and examination of the chest upon the right side gave evidence of an encapsulated empyema, for which thoracentesis with resection of a rib was performed. Recovery followed rapidly. Dr. Lange was inclined to believe, although unable to prove it, that there was a causal relation between the abscess in the biceps and the empyema, the latter being the result of an embolic process. In reply to a question, he stated that the largest collection of pus was above the diaphragm, probably a pint being in the cavity below it.

The PRESIDENT remarked that, in a similar case, he found the accumulation of pus much larger below than above the diaphragm, pressing into and upon the abdominal cavity.

DR. POST asked which occurs most frequently, abscess originating in the thoracic cavity with perforation downwards, or abscess beginning in or near the liver with perforation upwards?

DR. BRIDDON replied that he thought perforation upwards occurred most frequently. In a similar case admitted to the Presbyterian Hospital, probably a year ago, the cavity of the chest had been aspirated and a large quantity of pus removed. There was dulness on percussion up to the spine of the scapula, behind and to a line nearly upon the same level in the

axillary region, and there was a large area of dulness in front. There was also a marked bulging in the neighborhood of the liver, which was mapped out quite accurately by the area occupied by an enlarged liver. Fluctuation was detected by palpation over this large swelling, and the sensation could be distinctly felt carried through to the lumbar region. Dr. McBride, one of the visiting physicians, examined the patient, and regarded it as a case of perinephritic abscess, which had pressed the diaphragm upwards, developing a condition simulating empyema. Dr. Briddon attempted to aspirate from behind, and passed the needle three or four inches deep without obtaining anything. He then aspirated in front and removed a large quantity of bloody serum. There was no appearance of pus to the naked eye in the fluid, but the microscope revealed a certain number of pus corpuscles. He aspirated several times subsequently, and obtained the same kind of fluid, but never at any time fluid which had the usual appearance of pus. The patient subsequently came under Dr. L. A. Stimson's care, who made an incision behind into the cavity of the chest, and gave exit to a large quantity of pus. The patient subsequently expectorated large quantities of pus, and it was noticed that when the expectoration was obstructed or deficient in quantity, that the subdiaphragmatic swelling would increase in size. At the time he had some doubt as to whether the abscess was sub-diaphragmatic or not.

DR. YALE added an item in the clinical history which filled up an interspace between the service of Dr. Briddon and that of Dr. Stimson. He saw the patient soon after Dr. Briddon first saw him. The man came into the hospital one afternoon greatly oppressed in breathing, and Dr. Yale aspirated his thorax, and drew away a little more than ten pints of pus. This was followed by the operation already alluded to, and performed by Dr. Stimson. As he recollected, Dr. Stimson was not quite sure where the cavity was even after the operation had been performed. Dr. Yale thought, however, that the opinion of the majority of the visiting surgeons was that the case was one of perinephritic abscess which had worked its way upwards.

DR. LANGE then read a paper entitled

ANATOMICAL AND CLINICAL CONSIDERATIONS CONCERNING THE RETRO-PERITONEAL SPACE IN THE REGION OF THE LAST RIB.

DR. HALSTED asked Dr. Lange if he believed that the lower limit of the pleural cavity was lower than that which had been given by Dr. Hull.

DR. LANGE replied that in some cases it was much lower, and in other cases it was higher. On the average, however, he should say that it was lower.

DR. WEIR remarked that it was not often he had the opportunity of testing upon the living subject the accuracy of the remarks made by Dr. Lange. Recently, however, he had had the opportunity of cutting down upon the tissues in that region which were tolerably normal. The operation was one for making fast or anchoring a movable kidney. In that instance he found that the kidney fat, in a patient only moderately stout, was, on being incised, or torn through, capable of being readily separated, and in that manner enabling him to expose the kidney, and by traction on the investing tissue to raise the organ towards the surface quite satisfactorily. However, even in this case of movable kidney, there was considerable difficulty in reaching and appreciating the pelvis of the organ. He put his finger in for the purpose of education, because one or two years ago he had placed upon record the view that in those cases in which there has been for years previous signs of obstruction of one ureter, and then signs of obstruction in the other ureter developed, one might proceed to a lumbar incision, and by opening the pelvis of the kidney or ureter, above the site of obstruction, with a view to saving the patient's life; an operation which had recently, he said, been performed by Bardenheur with success.

DR. LANGE remarked that the position of the kidney could be changed considerably in a lateral direction. He had also found that if the lower part of the kidney was pulled upwards and laterally, the entire organ would be pulled not only laterally, but at the same time its lower edge would be upwards and made to perform a sort of torsion.

DR. BRIDDON asked Dr. Lange what incision he would make in nephrectomy.

DR. LANGE replied that he would make an incision extending from the apex of the last rib, if that could be felt; in other words, make Czerny's incision. If the rib could not be felt, he would take the line of the sacro-lumbalis, or the quadratus lumborum muscle. In reply to a question by Dr. Halstead, he remarked that counting from the spines could hardly be depended upon as giving proper directions for making the incision.

VESICAL CALCULUS.

DR. H. B. SANDS presented five small vesical calculi, the largest being one-half of an inch and the smallest about one-third of an inch in diameter, which he had removed thirteen days previously by lateral lithotomy. The interest of the case consisted in the fact that this operation had to be performed in the place of the crushing operation, which would have naturally been selected for the removal of stones of this size. The patient was a man fifty-seven years of age, who had suffered from symptoms of stone for three years. He was seen by Dr. Van Buren between two and three years ago, when it was discovered that his prostate gland was unusually large. On that occasion a sound was introduced into the bladder, but a stone was not detected. Some doubt seemed to have been felt by Dr. Van Buren as to whether or not a stone was present, for he told the patient that he wished him to return for another examination. Considerable irritation following this exploration, the patient did not return to have it repeated. He continued to suffer more or less from cystitis and irritable bladder, and about two months previous to the time when Dr. Sands first saw him, his symptoms became very severe. The patient suffered from spasmodic contraction of the bladder accompanied with great pain. Owing to prostatic hypertrophy, he had for nearly three months been unable to evacuate the bladder except by means of a catheter, which, however, was readily introduced. Previous to Dr. Sands' visit, the patient had been seen by Dr. Doughty, who had sounded him upon three occasions. At the first examination a calculus was detected, but it was observed that the sound, a Thompson's searcher, could not be moved as freely as usual in the bladder. The second and third examinations failed to detect any stone. When Dr. Sands visited the patient he administered ether, and made a careful exploration of the bladder and rectum. An instrument with a large curve passed readily into the bladder, but one having the curve of Thompson's sound, could not be made to enter. This fact had been previously noticed by Dr. Doughty. The prostate when examined by the rectum, was found to be exceedingly large. The urethra was measured, and was ascertained to be nine and a half or ten inches in length. When the Thompson's searcher was introduced it would pass the entire length of the instrument, which was nine and a half inches, and still its point did not enter the bladder.

The instrument seemed to be arrested by some bar of prostatic tissue. Introducing the instrument as far as it would go, Dr. Sands endeavored to move it, but the point remained nearly stationary, apparently grating against a rough surface of prostatic tissue. A stone was detected situated upon the patient's left side, and apparently just at the neck.

DR. SANDS decided to perform lateral lithotomy, and thirteen days ago he removed the five calculi presented; four were whole, and the fifth one was in fragments. Each calculus consisted of a uric acid nucleus, covered with concentric layers of phosphates. The patient, a few hours after the operation, had a chill and began to suffer from retention of urine. Dr. J. C. Hutchison, who had assisted at the operation, was called and succeeded in introducing an instrument into the bladder through the penis. Using this as a guide, he introduced a Nélaton's catheter through the perineal wound into the bladder and tied it in position. This gave the patient complete relief, and through the instrument remaining in the wound the urine was allowed to trickle for eleven days. About two days after the catheter was introduced it was noticed that the point of the instrument tended to escape from the bladder into the deeper part of the urethra; believing that it would be better to let the instrument lie there in the wound than in the bladder, thus preventing the liability to incrustation, it was allowed to do so, and every two or three hours it was introduced far enough to allow the urine to escape. Two days ago the catheter was removed from the wound, and has since been introduced through the penis, whenever necessary.

DR. SANDS regarded the case as interesting in two respects. In the first place, it afforded an illustration of the fact that even when the stone was small all cases of vesical calculi could not be treated by the crushing operation. A similar case came under his observation about six weeks ago, in which he was obliged to perform lithotomy and remove a stone, not larger than an almond, because he failed after repeated attempts to seize the calculus with the lithotrite. In this case there was no difficulty in inserting the instrument into the bladder, but it could not be made to seize the stone, which lay in a pouch behind the prostate. This cavity, which was apparently bounded behind by a muscular band extending between the orifices of the ureters formed a cavity which was not more than one inch in its longest diameter, large enough to contain a stone, but not large enough to allow the blades of the lithotrite to open and seize it.

The second point of interest was the occurrence of retention after the operation of lateral lithotomy, in which a pretty free incision was made. This was the second case in which this rare complication had followed lateral lithotomy in his practice. Usually the urine flows freely from the wound, and catheterism is not necessary. In the other case, as in this, the prostate gland was considerably enlarged, and he inferred from his experience that when lateral lithotomy is performed in such circumstances, especially where the bladder is weak, the proper course would be, after extraction of the stone, to wash out the bladder, insert a flexible catheter and allow it to remain in position. In addition, he believed it to be advisable to allow the point of the instrument to recede from within the bladder and subsequently to push it forward at regular intervals to permit the escape of the urine.

DR. POST referred to a case in which he assisted the late Dr. Buck in the performance of lateral lithotomy, and retention followed the operation. On introducing the catheter the next day, a large quantity of urine was drawn off. In that instance a fatal result occurred. There had not been retention during the operation.

DR. WEIR referred to a case in which Dr. Buck operated, and in which retention followed the operation, but in that instance another calculus was found in the bladder.

DR. POST remarked that Mr. Liston, of Edinburgh, once remarked to him that he was in the habit of introducing a catheter, and allowing it to remain after performing lithotomy, because he believed that the safety of the patient was promoted by it.

PTOSIS WITHOUT STRABISMUS, AND AMAUROSIS WITHOUT A DILATED OR SENSITIVE PUPIL.

DR. POST narrated a case as follows: A boy, fifteen years of age, was brought to his clinic last Saturday, who had been in the enjoyment of fair health, except that he had suffered from headache during the last two years to a considerable extent. About five days before he was brought to Dr. Post, the patient was suddenly attacked with ptosis of one eye, and there was almost absolute loss of vision attending it. There was bare perception of light. There was no strabismus, and the pupils of the two eyes corresponded with each other, and both were sensitive to light. The occurrence of ptosis without strabismus, and amaurosis without dilatation or sensitiveness of the pupil, seemed to him to be unusual.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 21, 1882.

THE PRESIDENT, FORDYCE BARKER, M.D., LL.D., IN THE CHAIR.

AFTER the report of the Secretary, the CORRESPONDING SECRETARY reported the death of Sir James Alderson, who died at an advanced age in London, in December of the present year; also that of Sir Thomas Watson, Fellow of the Royal College of Surgeons, who died in London, December 11, 1882. He was best known to the American profession through his lectures on the practice of medicine.

The STATISTICAL SECRETARY reported the death of Michael Hagan, a Fellow of the Academy, who died at the age of sixty-seven, on the 8th of December,

The SECRETARY read a letter from the Secretary of the Northwestern Medical and Surgical Society of New York, enclosing a check for one hundred dollars as a gift to the Journal Department of the Academy. Upon motion of Dr. White, the Academy extended to the above Society a vote of thanks for its kind and generous donation.

The next business was the presentation of a marble

BUST OF THE LATE PROF. JAMES P. WHITE, OF BUFFALO,

by Dr. Austin Flint, Sr. This was the gift of the late Prof White's son, Mr. James P. White. The sculptor was Mr. J. G. Mitchell, of Rochester.

DR. FLINT moved that the Academy extend a vote of thanks to James P. White for his generosity in presenting to it a marble bust of his father.

THE PRESIDENT called upon Dr. Thomas to second the motion, who responded in a few graceful and well-timed remarks, saying that he thought it eminently proper that the bust of our late honored Fellow should have a place in the hall of the Academy opposite that of the greatest of living ovariotomists, Mr. Spencer Wells, of London.

The motion was unanimously carried.

The next business was the scientific work of the evening.

DR. T. GAILLARD THOMAS presented

A CONTRIBUTION TO THE SUBJECT OF THE REMOVAL OF THE UTERINE APPENDAGES (TAIT'S OPERATION) FOR PROLONGED MENSTRUAL TROUBLES WITH RECURRENT PELVIC INFLAMMATIONS, WITH SPECIMENS.

In the issue of the *British Medical Journal* for July 29, 1882, appeared a remarkable essay by Mr. Law-

son Tait, of Birmingham, England, enunciating views entirely at variance with those heretofore held by the medical profession, advocating pathological tenets which were altogether new, and recommending a plan of treatment which is at once original and bold. This article was entitled, "Remarks on the Diagnosis and Treatment of Chronic Inflammation of the Ovary."

Dr. Thomas referred to the article at some length, first, because his own paper was based upon its suggestions; second, because he felt sure that the positions which it assumed would interest the Fellows of the Academy, even if they denied their validity; and third, because he himself was convinced that this bold and original surgeon had advanced views which were destined to open a new field for gynecological surgery in the future, and to exert upon this department of medicine an enduring influence.

While the speaker did not feel warranted from his own experience and observations in accepting all the conclusions of Mr. Tait, he believed that there was a sufficient amount of truth in some of them to make the essay above referred to one of the most valuable that this decade had produced for the gynecologist.

Since that period, which constituted so remarkable an era in the history of gynecology, when Henry Bennet, Simpson, and Marion Sims brought their eminent labors to bear upon this department of medicine, until the present time, a vast deal of attention had been directed to the uterus, vagina, the uterine ligaments, and the pelvic peritoneum, and the areolar tissue, while the diseases of the ovaries and Fallopian tubes have been left enveloped in a cloud of ignorance and uncertainty which few have endeavored to penetrate and dispel. Tilt, of London, the firm, persistent, and able advocate of the claims of ovarian pathology, has, during this time, stood almost alone, steadily and consistently enunciating views with which few sympathize and still fewer endeavor to sustain. At the present time, however, it seemed that a wholesome revolution was occurring in this respect; that reflective men, devoted to gynecology, were now recognizing the fact that a very large proportion of cases of menstrual disorder, pelvic neuralgia, and difficult locomotion, which were formerly attributed to the uterus, its ligaments, or the pelvic areolar tissue, are entirely due to ovarian disease, and that hundreds of cases in which this devoted organ was cut, cauterized, and leeched, had the same pathological origin.

Mr. Tait assumed: *First*, that the view formerly held that laparotomy operations should be postponed until absolute risk to the life of the patient rendered them necessary, should now be abandoned; and that in the hands of an expert they are at present so free from danger as to be practicable even when life is not jeopardized. *Second*, that the usually accepted doctrine of the dependence of menstruation upon the ovarium is wholly erroneous. *Third*, that the ovaries have nothing whatever to do with menstruation, and that this phenomenon is dependent upon the Fallopian tubes. *Fourth*, that the many cases of abnormal menstruation are justifiably treated, and are relievable in no other way than by extirpation of the ovaries and tubes. *Fifth*, that in chronic ovarian disease the tubes are invariably involved, and that in most cases it is the tubes which are chiefly at fault. *Sixth*, that the mortality in his last thirty-five operations having been only one, even this slight loss of life is susceptible of diminution in the future. *Seventh*, that many of those cases heretofore regarded as instances of menstrual or recurrent pelvic peritonitis or cellulitis are really due to tubal dropsy and ovarian disease; an occasional discharge of the purulent accumulation of the former giving rise to slight and passing attacks of these affections.

Dr. Thomas stated that the removal of the uterine appendages, as it concerned his remarks, had nothing whatever to do with the subject of ovariotomy. The latter operation was resorted to for the removal of large and increasing tumors, which, if not removed, almost invariably destroy life within a few years. The former was performed for severe menstrual disorders and nervous troubles having their origin in the uterine annexæ, which, while they do not jeopardize life, render it utterly miserable and intolerable.

Dr. Thomas's contribution was merely a report of four cases in which very grave menstrual trouble accompanied by all the symptoms of recurrent pelvic peritonitis and cellulitis were found due to tubal dropsy existing coincidentally with chronic ovaritis, exactly as Mr. Tait had described it.

Case I. was a colored woman, 30 years of age, who commenced to menstruate at fourteen; she had been married nine years, and was the mother of one child, eight years old. Her menstruation was perfectly normal up to the period of weaning her child, eighteen months after delivery. At that time she was taken with very sudden symptoms resembling those of cellulitis or peritonitis, accompanied with slight bloody discharges from the vagina. She was confined to bed for about a week, since which time she has been a confirmed invalid, her menstrual periods being painful, scanty, and irregular. Upon making an incision in the mesial line and passing two fingers into the iliac fossa, Dr. Thomas drew up an ovary about as large as an English walnut, distended by a multitude of small cysts, and the Fallopian tube resembling closely in size an ordinary sausage, and giving to the touch very much the feeling of a loop of intestine. Tube, ovary, and ovarian ligament were ligated with an aseptic banjo-string and removed; the same condition was found to exist on the other side, and the same procedure was adopted. The operation was performed under the strictest antiseptic precautions, except that the spray was not used during the operation. On the thirteenth day after the operation the patient was sitting up in bed, having recovered completely, without a bad symptom. The time of one menstrual period had passed, and as yet no sanguineous discharge had occurred.

Case II. was a lady 25 years of age, who had been married three years, and was the mother of one child, eighteen months old. Her menstrual periods began at the age of seventeen, and before her marriage gave her no trouble whatever. Nine months after confinement she was taken with an attack of pelvic inflammation, which seemed to have been unquestionably one of slight cellulitis or peritonitis. Since the birth of her child she had never been well, and suffered from constant pelvic pain, with occasional accessions of inflammation. She menstruated irregularly and painfully, and suffered from leucorrhœa and difficulty of locomotion. At the operation the ovaries were found very slightly diseased, but the tubes were distended by large accumulations of pus. Both ovaries and tubes were removed. The patient recovered without any remarkable rise of either pulse or temperature.

Case III. was that of an unmarried lady aged 22 years, who began to menstruate at fourteen, from which time she had suffered from most dreadful dysmenorrhœa until a year ago. Pain was confined to the menstrual period, and was agonizing for thirty-six or forty-eight hours. Both ovaries and tubes were removed. The ovaries were found filled with small cysts and the membrane lining the tubes inflamed and bathed with pus, which was, however, not confined within them so as to create dropsical enlargement. The patient recovered without unfavorable symptoms.

Case IV. was a maiden lady 27 years of age, who began to menstruate at fourteen. This was accom-

panied with severe pain until two years ago. Her case would have been classed as one of those very common ones of exceedingly severe dysmenorrhœa. At this time she had a short attack of pelvic peritonitis, and had ever since been a most wretched invalid, having become greatly emaciated, suffering constantly, and being almost continually confined to bed.

An operation being decided upon, owing to her low vital condition, an attempt was made to get her into a more favorable condition for the operation. This, however, proved ineffectual after a fair trial, and it was decided to operate at once, which was done on the 11th of the present month. The ovaries were not very much diseased, but they contained a number of small cysts. The Fallopian tubes were dropsical, and throughout their whole extent firmly bound down by false membrane, which had to be torn with considerable force. The operation was tedious and difficult, and at its conclusion no one who witnessed it could avoid making an unfavorable prognosis as to the result. Twenty-four hours afterwards one of those insidious attacks of peritonitis, with low temperature and slight pain, which so often develop after laparotomy, declared itself, and on the sixth day destroyed the patient's life.

The ovaries and tubes that were removed from the first, second, and fourth cases were presented to the Academy, those of the third having accidentally been lost. The tubes were greatly enlarged and characteristic of the condition described by Tait.

Dr. Thomas called attention to the fact that the results from Mr. Tait's oöphorectomy operations had, like those of Keith, Wells, and several other European surgeons from ovariotomy, been exceedingly gratifying. In this country we could present no such glowing accounts of the results of these operations. It was true that surgeons might lull their misgivings to rest by listening to the kindly suggestions of a superior physique on the part of patients, a more advantageous climate, and the concentration of cases in the hands of experts on the other side of the Atlantic, but it was unlike the genius of our land to accept such placebos. He suggested, therefore, that we look the disagreeable truth boldly in the face, and recognize the fact that, so far at least, our European brethren in this field of surgery were for some unknown reason ahead of us. The discrepancy which existed between our statistics today could not be met by argument; it must be abolished by results.

THE PRESIDENT announced that the paper of Dr. Thomas would not be discussed independently.

The next paper was a

COMPARISON BETWEEN GASTRO-ELYTROTOMY (THOMAS'S OPERATION) AND OÖPHORO-HYSTERECTOMY (PORRO'S OPERATION),

by DR. HENRY J. GARRIGUES.

The paper consisted of a critical comparison, from the surgical standpoint, of the two operations the aim of the author evidently being to make a strong plea in favor of Thomas's operation. He considered that the latter had various advantages over the Porro or the Porro-Müller operation, and argued that it should, at least, be given a fair trial. By operating early, or refusing to operate upon dying subjects, there could be no doubt but that the danger of the operation would be shown to be much less than the present statistics would seem to indicate. Though the Porro operation had an advantage from the standpoint of antiseptic surgery, it was nevertheless possible to enforce antiseptic precautions to a considerable extent in Thomas's operation. One advantage of the Porro-Müller operation was that it could be commenced before the commencement of labor.

DR. POLK being called upon to open the discussion, remarked that there was very little to be said upon the operation beyond what was contained in the paper, except, perhaps, to place the operation, and to disabuse the minds of its opponents as to its difficulties. He thought, in placing the operation, it was a mistake to put it in competition with Cæsarean section and its modifications. There were cases in which the Cæsarean operation was the only one that could be performed. In certain cases, he thought, the operation of embryotomy might well give way to gastro-elytrotomy. The latter operation rested between Cæsarean section and its modifications on the one hand, and embryotomy on the other. The laceration incidental to embryotomy was infinitely more detrimental than that produced by gastro-elytrotomy. This remark referred only to cases where there was the minimum limit to the deformity. Dr. Polk went on, and described, step by step, in detail the anatomical points in the two operations, and thought the evidence thus adduced showed that Thomas's operation was the simpler of the two.

DR. TAYLOR spoke in favor of oöphoro-hysterectomy, and was followed by DR. SKENE, of Brooklyn, who argued in favor of Thomas's operation.

DR. LUSK thought that when there was a dilated cervix, no operation was better than gastro-elytrotomy. It was also the only operation to be thought of in cases where there was a contracted pelvis over the head. He was not prepared, however, to say that gastro-elytrotomy would supersede all other operations.

Further remarks were made by DRS. GILLETTE and EMMET, and the discussion was closed by DR. GARRIGUES.

RHODE ISLAND MEDICAL SOCIETY.

Semi-annual Meeting held at Providence, December 21, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE semi-annual meeting of the Rhode Island Medical Society was held in Providence, on December 21st, THE PRESIDENT, DR. JOB KENYON, in the chair. The attendance was large.

THE SECRETARY, DR. GEORGE D. HERSEY, read the records of the last quarterly meeting, which were approved.

DR. M. FIFIELD, of Centreville, presented a report of the following

CASE OF INTRA UTERINE TUMOR.

The patient is a woman 39 years of age, whose menstruation, beginning at 13 years of age, continued very profuse and frequent up to six years ago, the periods recurring every two or three weeks during the whole time. During the past six years there has been no menstruation, but very severe uterine hemorrhages have occurred at irregular intervals. One of these took place last July and was with great difficulty checked by the use of ergot and viburnum.

An examination at that time showed the abdomen to be greatly enlarged, the tumefaction extending above the umbilicus, its upper left side being distinctly rounded and hard on palpation. On examination per vaginam the cervix uteri was found shortened and softer than normal, with the os so patulous as to readily admit the tip of the finger which immediately encountered a firm, hard mass completely filling the uterine cavity. Since July there had been no recurrence of the hemorrhage until last week, when there was a profuse and alarming loss of blood. Walking is painful to the patient, but she can ride in an easy carriage in comfort.

The question is asked, Is the intra-uterine mass a fi-

broid tumor, and if so, what treatment is indicated? Is Battey's operation justifiable in the case?

DR. LUCY R. WEAVER said, regarding a case operated on by Dr. A. E. Tyng, and reported two years ago that a fibroid existed in that case, and Battey's operation was done; that almost immediately the tumor began to diminish in size and could now scarcely be felt at all and that the woman regarded herself as being now in perfect health.

DR. J. H. MORGAN, of Westerly, read the report of a case of

ANEURISM OF THE DESCENDING AORTA,

occurring in a Scotch stone-cutter, 38 years old, who was first seen by the writer April 19, 1882, soon after coming from Vancouver Island. Formerly in vigorous health, he had then become weak and emaciated. For fifteen months he had suffered from neuralgic pains in the right thigh and leg. A well-marked prominence existed in the lower dorsal portion of the spinal region, in which severe pain was caused by allowing his weight to come down forcibly on his heels. Percussion and auscultation gave only negative results. Caries of the vertebræ being diagnosticated, it was proposed to put on a plaster-of-Paris jacket, but to this measure the patient himself objected. The case went on without marked change until May 18th, when, after a day of less suffering than usual, death occurred suddenly. The autopsy showed the diaphragm to be prolapsed, the liver pushed downward and to the left, the stomach contracted, the spleen and pancreas normal, the heart crowded to the left, and the right lung compressed and adherent. On the right side of the spinal column and behind the kidney was found a ruptured aneurismal sac, communicating by a small orifice with the descending aorta. The sac had ruptured into the right pleural cavity. The writer emphasized the need of caution in the application of the plaster jacket, in face of the possibility that, as in this case, the spinal disease may have been caused by the pressure of an undiscovered aneurism.

DR. F. B. FULLER exhibited a specimen of

ENCEPHALOID OF THE TESTICLE.

At 12 years of age the man had received a blow in the scrotal region which immediately caused acute orchitis. This subsided, but the right testicle soon began to enlarge, and became painful. The condition changed but little for several years when the trouble increased rapidly for four months until the growth became so burdensome and painful that it was excised February 10, 1882. The tumor, which was the specimen shown, was the size of a fœtal head at term; its upper two-thirds were fibrous and contained cysts and enchondromatous masses; the lower third was encephaloid carcinoma. The patient recovered well from the operation, but very soon began to have severe pain in the abdomen which was from time to time relieved by the escape per rectum of large quantities of clots, blood, and pus. Death occurred in ten months, and post mortem there was found in the abdominal cavity a mass of encephaloid cancer the size of a man's head.

DR. W. H. PALMER, of Providence, read a paper on

CORONERS AND THEIR DUTIES.

The ancient origin of the system of investigation through the office of coroner was alluded to as dating back as early as the year 908 in England, in which country the officer, variously termed "coroner," "crowner," and "coronator"—either title signifying a direct representative of the crown—enjoyed uncommon authority and privileges, which the writer described. The establishment of the coroner system was said to be one of the earliest concessions made by the crown to the people—the coroner having first summoned a jury from the ranks of the common people.

In those early days the appointment of coroners was naturally hedged with due precaution, and it was directed that none but loyal and discreet knights should fill the position. In 1640 there was published in England a long and explicit summary of the coroner's duties.

Our advancing civilization is unable to dispense with the coroner system or its equivalent, notwithstanding, from time to time, public disapproval demands the abolition of the coroner entirely.

The coroner's office, organized to make inquiry into the cause of death, is one of special interest to the medical profession.

The different methods employed in some of the countries of continental Europe, where the office of coroner does not exist, were described.

Although the method of appointing coroners differs in the various States in this country, there is agreement in one direction, viz., coroners are almost universally appointed without special qualifications for the position.

It would be as rational to hand a stopped watch to a lawyer for him to investigate the cause of the trouble as to expect a non-medical coroner to properly and intelligently seek for the cause of the stopping of a human life, a machine so manifold more intricate and delicate. Now, in England, the office is filled almost entirely by medical men.

The writer claimed that in Rhode Island the authority and work of the coroner are neither merely supplementary nor inefficient, as has been alleged in the public press. He alone has authority to take charge of dead bodies in suspicious cases, to order exhumations, examinations, and analyses; to enter houses to investigate, to summon juries and witnesses, impose fines, etc.

The system at present employed in Massachusetts, whereby the office of coroner is supplanted by that of medical examiner, was reviewed in detail, and the following mentioned as among the most important features of that system:

1. The best element is that only medical men are appointed.

2. An inquest is held without the intervention of a jury, the opinion of *one* man prevailing instead of *six*.

3. At the option of the trial justice, the inquest *may* be held in private.

In the opinion of the writer, however, it did not seem probable that the Massachusetts system would take the place of the coroner.

The coroner system, *at its best*, is *the best*, and the defects charged against it are not *inherent* in the system, but arise from the carrying out of the application of the system.

DR. A. BALLOU thought the medical profession were not alive to the importance of having suitable men appointed coroners. He expressed his approval of the paper just read, and also his belief that the legislation in Rhode Island bearing on the subject is not inferior to that of other States. The system employed in Pennsylvania is very expensive, and, as managed, is far inferior to our own.

DR. CASWELL expressed his interest in and approval of the paper. He had thought, however, that the Massachusetts system was excellent and entirely successful.

DR. O'LEARY asked Dr. Palmer if it was within the province of a Rhode Island coroner to inquire beyond the *proximate* cause of death, *e. g.*, in case of drowning on board ship, shall the coroner investigate as to the seaworthiness of the ship, etc.

DR. PALMER replied that the jury should not be re-

stricted, and might seek for remote and contributory causes of death.

THE CENSORS' REPORT

was next in order, and was presented by Dr. S. S. Keene for the Board. It simply recommended that the applications for fellowship of Dr. Jean Antoine Baptiste Tanguay and Dr. George Reuben Smith, which were received at the last quarterly meeting, be referred to the next meeting. This report was accepted.

DR. ROBERT F. NOYES, of Providence, then read a paper on

PERITYPHLITIS AND PERITYPHLITIC ABSCESS.

The cæcum, covered in front and laterally by peritoneum, and posteriorly by cellular tissue, has functions that are peculiar and distinct. Its contents pass slowly and in a direction opposed to gravitation; hence the liability of the lodgement of fruit seeds and stones, bits of epithelial and fibrous tissue from the ingesta, etc. It may become enormously distended—even to the capacity of a gallon, and its walls greatly hypertrophied. The symptoms of inflammation of the cæcum and its appendages are pain in the right iliac fossa, vomiting, pain and numbness in the thigh, frequent and painful micturition, and the presence of regional swelling.

Regarding the appendix vermiformis cæci, it was said that it exists in the ourang and ape alone of the lower animals; that its non-uniformity anatomically, and in its investments, complicates the diagnosis; its orifice sometimes becomes occluded, causing atrophy; calculi may form in it; ulceration in the appendix is less apt to be followed by cicatrization than in case of ulceration of the cæcum, but perforation is more common in the appendix. Perforation may occur without the previous existence of symptoms severe enough to attract the attention of the patient.

The softening of the cæcum renders caution necessary in the use of copious injections, especially when the rectal tube is introduced. In the great majority of cases perforation of the vermiform appendix is caused by foreign bodies. Reference was made to Dr. Bartholow's description of cases of idiopathic perforation of the appendix.

Regarding the symptoms in perityphlitis, the dull pain is due to cellulitis, the sharp pain to peritonitis, the pain and numbness of the thigh to pressure on the lumbar plexus; the vomiting is due to obstruction of the intestine. The tumefaction is at first hard, and afterwards becomes softer. To diagnosticate perityphlitic abscess may be very difficult, but it is very important. Examine for swelling, pain, and fluctuation, and employ the aspirator needle in doubtful cases. In diagnosis the following must be considered in differentiating: Tumors due to fecal accumulation; psoas abscess; malignant disease; inflammation of right ovary; perinephritic abscess; movable kidney, with suppuration; abscess of the abdominal wall; in children hip-joint disease; and invagination, especially if at the ileo-cæcal region, when it may be very difficult to determine the diagnosis.

The prognosis in perityphlitis depends largely upon the etiology. It is more favorable when the cause is exposure to cold or traumatism. In case of abscess, the course taken by the pus largely influences the result. If it escapes into the intestine or bladder, it is more favorable than through the abdominal wall or upward through the diaphragm.

The writer had collected notes on 100 cases, of which 15 were fatal. Perforation of the appendix is almost always fatal, though a few cases have recovered.

In the treatment of perityphlitis, saline laxatives should be used, with enough opium to relieve pain and control peristalsis; turpentine fomentations; leeches may be applied to the ileo-cæcal region. There should be frequent examinations for abscess, and when found it should be opened by an incision parallel to Poupart's ligament. When pus is suspected, but fluctuation is not present, the exploring needle may be used. The needle is valuable in diagnosis, but can not supersede the knife. Out of 100 cases of abscess 31 were due to presence of foreign bodies, and in this class of cases the knife is far better than the needle. When an incision is made it should be carried down to the fascia transversalis, when deep-lying pus is suspected. Several authorities were quoted as to the proper time for opening the abscess. The sac of the abscess on percussion may give a tympanitic sound as though the intestine lay in front, but the writer had never found this condition present. The treatment in case of perforation of the appendix vermiformis should include opium, fomentations, and perhaps the application of the ice-bag in the iliac region.

DR. A. BALLOU cited three fatal cases in point:

1. The case was seen during the acute inflammatory stage. Opium and fomentations were used. A portion of the cæcum became gangrenous and was thrown off per rectum. The specimen was preserved.

2. The case of a woman of 200 pounds weight and seven months pregnant. There was no movement from the bowels and death occurred from inflammation. There was no tendency to abortion. The autopsy showed that two inches of the ileum had become invaginated by the cæcum, strangulated and gangrenous.

3. This case was similar to the second, the ileum being invaginated within the cæcum and gangrenous.

DR. WM. SHAW BOWEN, of Providence, then read a paper on a case of

ULCERATION OF THE LARYNX.

The patient, Mr. H., is 39 years old, of spare build, regular habits, and in comfortable circumstances. Six years ago he fell down stairs, striking his face on an open door, causing fracture of the nasal bones, and displacement of the vomer. A few months later a hard pimple appeared near the right ala nasi. It broke down and refused to heal. The disease extended up the nostril on the mucous membrane, destroying a portion of the vomer and middle turbinated bone. There was but slight involvement of the skin outside the nostril. A course of hot-iron treatment, in Boston, was followed by an apparent cure.

In December, 1881, he began to have slight soreness of the throat, cough, and hoarseness; swallowing was painful, especially of condiments; soon no solid food could be swallowed. A physician pronounced it to be laryngeal phthisis, and tried the usual remedies, with no avail. When first seen by Dr. Bowen the ulcerative disease had so far advanced that there had been extensive destruction of bone; œdema and cicatricial bands had left only a small orifice between the pharynx and the post-nasal space, so small as only to admit a fine bougie. There was a mass of mucous polypi in the nose, attached to the middle turbinated bone. The left tonsil was enlarged. The epiglottis was bare, somewhat rigid, and sensitive to the touch. There were a few nodular masses on its dorsum. It was very difficult to obtain a view of the vocal chords. There was harassing cough, and the voice was gone. Except in carcinoma or throat phthisis, a worse condition of the throat is rarely seen.

No syphilitic history was acknowledged, but it was decided to try the mixed anti-syphilitic treatment. Mercury, iodide of potassium, cod-liver oil, and sea-water baths were employed. Morphia and powdered starch were dusted over the raw surfaces, together with

the application of olive oil. This treatment was continued three weeks without marked change in the local condition. The diagnosis of laryngeal lupus was then made. The arytenoideus was involved in the ulceration, some of the small nodular masses existing on its surface.

The treatment was now changed. A solution of nitrate of silver (480 grains to the ounce) was carefully brushed over the ulcerated surface. The first two applications caused severe laryngeal spasm, and no marked improvement followed the first twenty applications. The voice then became a hoarse whisper, and the cough was much less troublesome. The treatment was continued six weeks, resulting in marked improvement in all the local conditions. The tincture of the chloride of iron and iodoform were also used locally. In November, the voice had improved to a hoarse tone, and the dysphagia was gone. The silver and iodoform treatment was then stopped, and a stimulating inhalation of benzoin used instead.

DR. DANIEL O. KING, of Pontiac, reported

A CASE OF PERITYPHLITIC ABSCESS,

which recently occurred in his practice, in a boy 4½ years old. The first symptoms were pain in the right iliac region, tympanitis, and vomiting. An injection relieved the symptoms, which returned the next day, however. Laudanum and chloric ether were given internally. The case went on for a week, when the writer was discharged. He was recalled to the case ten days later, and found the patient in a most critical condition, apparently very near death. A soft boggy swelling the size of an egg was now found in the right iliac space. The swelling was tympanitic on percussion and gave no distinct fluctuation. The patient was etherized, and by means of a hypodermic syringe a few drops of pus, having a fecal odor, were withdrawn. An incision, two inches long, was then made parallel to Poupart's ligament and carried down to the fascia transversalis. The fascia was punctured by the needle, letting out a fluid which the microscope showed to be purulent. A warm carbolized dressing was applied. The patient improved. Fecal matter oozed through the incision for some days, and some fragments of apple pie, eaten by the boy contrary to directions, also oozed out. The boy is now strong and well.

In this case the writer thought the abscess was caused by perforation of the vermiform appendix, for if the abscess had been primary it would have pointed into the intestine at once.

THE APPOINTMENTS OF DELEGATES

to the annual meetings of other State Societies were then named by the Chair, as follows:

Connecticut.—Drs. O'Leary and Browning.
New York.—Drs. Ely and W. O. Brown.
Vermont.—Drs. Robbins and O. C. Wiggin.
New Hampshire.—Drs. A. Ballou and W. R. White.
Massachusetts.—Drs. Miller and Swarts.
New Jersey.—Drs. Parks and Bullock.
Maine.—Drs. Anthony and Bowen.

DR. CASWELL reported two more

LITHOLAPAXIES.

The first was a secondary operation on a patient in whose bladder a few fragments remained after the first operation. The secondary operation was done in October last, occupied forty minutes, and resulted in the washing out of ninety grains of stone.

Case second, that of a man forty-seven years old, who was operated on, in 1876, by the old lithotrity method, eleven sessions having been required to free the bladder from fragments. He began to suffer again last spring. At the recent operation Dr. Caswell, believing the stone to be small, made a preliminary washing before introducing the lithotrite at all. A small stone was at once drawn into the eye of the instrument by suction, and was removed while so engaged without difficulty. The stone was round, $\frac{7}{8}$ of an inch in diameter, flattened into a disk shape, and perfectly whole and symmetrical. It was formed of urates and weighed 10 grains. Further examination revealed the presence of a second stone in the bladder, which was crushed and washed out at once, making 31 grains in all removed. The entire operation lasted half an hour. The patient was up and about his room the next day, and attending to business in a week.

Dr. Caswell emphasized the great advantages and superiority of litholapaxy over all other stone operations, and compared it with the far more dangerous lithotomy, especially in such a case as he had just reported.

He then exhibited Dr. Bigelow's modified evacuating apparatus, and explained its application.

DR. W. E. ANTHONY, of Providence, read

AN OBITUARY NOTICE OF DR. GEO. CAPRON,

who died September 21, 1882. It was mentioned that in a practice covering sixty years, Dr. Capron had attended more than ten thousand confinement cases, a branch of practice in which he excelled.

PRESIDENT KENYON announced the death on November 28th, of Dr. George E. Mason, of Providence, a Fellow of the Society, and appointed Dr. J. W. Mitchell to present an obituary at the next meeting.

DR. E. M. SNOW said there had been 109 deaths from typhoid fever, in Providence, since September 1st.

Adjourned.

OBITUARY.

GEORGE FOX, M.D.

DR. GEORGE FOX died in this city on Wednesday, the twenty-seventh day of December, in the seventy-seventh year of his age. Although Dr. Fox relinquished his private practice and his professional appointments almost thirty years ago—*grande mortalis ævi spatium*—his death will still be felt in the medical community of which he was a well-known and distinguished *confrère*.

Dr. Fox belonged to a family in the Society of Friends, of high social position and extended influence, in the city of Philadelphia. He was graduated from the University of Pennsylvania, Bachelor of Arts, in 1825, dividing the second honor in his class with the late Adolphe E. Borie. The same year he began the study of medicine under his brother, Dr. Samuel M. Fox and Dr. Joseph Parrish, and received the degree of Doctor of Medicine from the University, in the spring of 1828.

During the two following years he was resident physician in the Pennsylvania Hospital; Dr. James A. Washington being his colleague the first year, and Dr. Ralph Hamersly the second. During his term of service as resident he devised the apparatus for fractured clavicle, still known as the *Fox apparatus*, and of which Sargent well says in his *Minor Surgery*, "No one who has employed it will be disposed to use any other as a substitute." In 1848, Dr. Fox was elected one of the visiting surgeons to the Hospital, and fulfilled all the duties of that position with the greatest fidelity so long as he remained in the city. On the organization of the Wills Hospital for the indigent blind, and lame, Dr. Fox with Drs. Hays, Littell, and Isaac Parrish, were elected surgeons, and he diligently served that institution until his election to the Pennsylvania Hospital, when he resigned his position at the

Wills. After resigning from the Wills Hospital as surgeon, Dr. Fox was elected one of the Board of Managers, and acted as such until his removal to the country.

In 1831, Dr. Fox was elected a Fellow of the College of Physicians, and always showed great interest in its affairs. He was an active member of its Building Committee, and took a leading part in the selection and purchase of the site of the present hall of the College and in its erection. He possessed, it may be said, peculiar and special qualifications, which enabled him to be of great assistance to the College in these transactions.

At the time of the formation of the American Medical Association, and for several years afterwards, Dr. Fox was very prominent in advancing its interests and furthering its objects. He attended the meetings as one of the delegates from the College of Physicians.

In the practice of his profession Dr. Fox was eminently successful in *curing his patients;* or, if such phraseology be not acceptable, patients were very apt to get well under the means he used. As an instance of this, of all the cases in which he was forced to amputate a limb at the Pennsylvania Hospital, some twenty in number, only one died. He was distinguished for good judgment, and he was prompt, energetic, and not sparing of himself when his patients needed him. Moreover, to use a frank phrase, *il avait les opinions tranchus;* he was not habitually indifferent as to which course to pursue, but he was decided in believing one certain thing was the one thing to do, and that he did.

Dr. Fox was happily married on September 25, 1850, to Sarah D. Valentine, of Bellefonte, by whom he had six children, four sons and two daughters, all of whom survive him. One of his sons, Joseph M. Fox, has graduated in medicine, and been resident in the Pennsylvania Hospital; thus far following in his father's footsteps. *Dos magna, virtus parentum;* this is true in our profession as elsewhere.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

SPECIAL LEGISLATION TO CONTINUE THE IMMIGRANT INSPECTION SERVICE TO THE NATIONAL BOARD OF HEALTH.—At the semi-annual meeting of the National Board of Health held in Washington, D.C., December 12–14, the following communication was submitted:

WASHINGTON, D. C., December 12, 1882.

At a meeting of representatives of State and other boards of health, who have come here to place before the National Board of Health the importance of continuing the sanitary inspection of immigrants for the prevention of the introduction of contagious diseases into this country, and their spread throughout the country, W. M. Smith, M.D., Health Officer of the port of New York, was chosen chairman, and Dr. Henry B. Baker, Secretary of the Michigan State Board of Health, was chosen secretary.

The subject having been verbally presented to the National Board of Health, at its meeting this day, and the Board having requested a summary statement in writing of the views of those present, the subject was discussed at some length, and a communication to the National Board of Health was formulated as follows:

To the National Board of Health:

GENTLEMEN: The undersigned respectfully represent that the maintenance, at the principal ports of entry in the United States, of an efficient sanitary inspection of immigrants as to their protection from smallpox, and as to their liability to communicate that disease, is necessary to prevent the frequent introduction of smallpox and other contagious diseases among the people of this country; and that such inspection is necessary to secure efficient action at ports of departure and on board ships on the part of the transatlantic steamship lines engaged in the transportation of immigrants.

There is also urgent need for constant watchfulness to detect contagious disease occurring in immigrants after they have passed the ports of entry—the disease not having appeared when they were examined at the port of entry.

We therefore urge upon you the necessity for continuing such inspections as have been established.

This inspection service is such that its benefits have no relations to State boundaries, but its protective influences extend widely throughout this country, consequently expenses therefor should not properly be borne by any local or State board of health. We believe that it is the duty, and one of the highest duties, of the national government to maintain this inspection service whenever needed in this country.

In our opinion, the sum of $25,000 will be sufficient for this service during the remaining months of this fiscal year.

Wm. M. Smith, Health Officer, Port of New York. John H. Rauch, Secretary State Board of Health of Illinois. H. R. Mills, M.D., Henry B. Baker, M.D., Secretary Michigan State Board of Health.

This report and the recommendations were concurred in by a large number of representatives of State and city boards of health who were present.

This communication was transmitted by the Board to Congress, and was referred to the committee on Epidemic Diseases, and on the Public Health in the Senate and House of Representatives.

Senator Conger and Mr. Roch, of Michigan, have since introduced bills into the two Houses appropriating $25,000 to enable the National Board to continue the service during the remainder of the fiscal year.

NEW ORLEANS.

(*From our Special Correspondent.*)

PRESENT PREVALENCE OF MALARIA, AND ITS CLINICAL HISTORY.—The weather here has been exceptionally beautiful. Frosty nights have been followed by cloudless days and a bracing atmosphere. Notwithstanding this fact, the admissions to the Charity Hospital have been unusually large—averaging nearly fifty a day. Almost the whole of these new admissions are persons suffering from malarious affections. Although the first range of temperature arrests at once the further development of the malarial poison, there can be no question that it is liable to determine attacks in the persons of those previously exposed to its influence.

After more than two score years of study of the phenomena of this class of diseases, your correspondent can declare that the most remarkable feature that they present to his mind is the difference in symptoms which they present in some seasons as compared with other seasons. During the present year, diarrhœa and malarial coma have been the most common and dangerous symptoms. In some former years hæmaturia and congestive chills have been the principal sources of danger. This year he has not met with a case of either of these forms of pernicious fever.

Why should these differences obtain in the effects of a poison which is commonly looked upon as isomorphous?

There appears to be no way of explaining the fact, except by admitting differences in toxic qualities of

different crops, or by claiming that the systems of those exposed undergo some unknown changes which determine the variations in the effects of the poison. The former appears to be the more rational theory.

The mortality rate from this class of diseases has not been great. The diarrhœas have in many instances been cured by cinchonism. Where this has failed, small doses of sulphate of soda and morphia have ordinarily accomplished a cure.

Quite a number of cases have been complicated by cardiac troubles. The most common of these has been dilatation caused by undue physical exertion in that state of innutrition and muscular atony caused by chronic malarial toxæmia. These cases recover with surprising certainty and rapidity as repair in the nutritive processes and restitution of degraded fluids are effected. Of course, rest from physical exertion is a *sine quâ non* to recovery.

Inflammations of cardiac structures have also complicated several malarial fever cases.

Your correspondent has now under observation a case of endocarditis associated with intense malarial cachexia, and a hypertrophied spleen, but with no history of rheumatism.

We are well satisfied that the malarial cachexia, like that of Bright's disease, invites inflammations of both mucous and serous structures.

We had one patient die of symptoms which he attributed to ante-mortem vascular clot. A previously strong man had two attacks of malarial fever during two months preceding the first observation. At this date he presented the appearance of alarming deterioration of the systemic fluids, but he was encouraged to hope for a reasonably prompt restitution. During a violent fit of vomiting he complained of sudden pain at the upper part of the sternum and in the præcordial region. At our next visit we found a very intermittent heart, with cool extremities and surface and anxious countenance. A peculiar systolic murmur was heard over the heart and quite as distinctly over the upper part of the sternum. Death ensued about forty-eight hours afterwards, but no autopsy was permitted.

BOSTON.

(From our Special Correspondent.)

DR. CARPENTER'S FIFTH LECTURE ON HUMAN AUTOMATISM.—The first subject discussed was the automatism of those perceptive processes, by which are determined the distance, direction, and notably the solid form of external objects. In us this is acquired instead of being congenital as in the lower animals. Many observations of infants and of adults who have recovered sight by means of the removal of the lens (cataract) prove the truth of this statement, and show that a combination of the impressions received from several senses is necessary in order to create the ideas we possess of external objects. A person blind from birth, upon obtaining vision, will not recognize forms like the cube, sphere, and pyramid, notwithstanding the sense of touch has long since made them familiar. Locke doubted this and the question, then unanswerable, since his time has received repeated answer. For example, a young man whose sight was restored in one eye, was unable by vision to distinguish a cat from a dog, both of which he was accustomed to fondle. He finally taught himself to know the cat by handling her frequently, meanwhile looking at her intently. A remarkable case was that of a child aged 4 years, blind from birth, who recovered sight by the operation for cataract. He gave evidence of his ability to see. The operation had occurred in a house with which the boy had become familiar by feeling his way about. After the operation, while going over the house, he at first felt and looked as he went, but for some time evidently preferred the guidance of touch, and eventually began to find his way by sight alone. Upon returning to his home, however, he was quite unable to discover his way by sight among objects perfectly familiar to him and for a long time closed his eyes in going from place to place. But when taken to a place entirely strange to him he used his sight without embarrassment, and finally overcame the difficulty in using sight at home.

In a third case a blind seamstress obtained her sight, and when shown a pair of scissors could not recognize without touching them. These examples indicate the amount of education necessary in the training of our automaton, which, once disciplined, subsequently makes no mistake unless something is wrong in the mechanism.

Our perception of solid form is the result of a union of the effects of two modes of perception, as is proved by the stereoscope. In looking through this instrument two slightly dissimilar pictures, such as are thrown upon the retina of the two eyes, when the observed object is near, by their difference in direction form an object in relief and the mind thus perceives one solid object instead of two flat ones. This conversion is an automatic process the result of education. Sir Charles Wheatstone, who invented the stereoscope, also investigated the singular fact that a body first held at a distance, and then closer to the eyes, always presents the same size to the mind, although the image on the retina is much larger. By bringing the pictures in the stereoscope nearer together, thus causing the eyes to converge, the object shown seemed to diminish in size, although the images on the retinæ were not changed in dimension. In a similar manner, if the pictures were separated until the direction of the eyes was made parallel, the size of the object was made apparently to increase in size. This proves that the idea of the size of near objects and the relative distance of their posts depends upon an automatic comparison of the size of the image on the retinæ and the degree of convergence of the eyes. (Dr. Carpenter discussed these phenomena more at length in the *Edinburgh Review* about 1860.)

At distances which make the direction of the eyes sensibly parallel, we no longer possess this muscular aid in determining size and relief, and our perceptions, depending mainly upon light and shade, are accordingly less distinct. At a distance we cannot distinguish objects actually in relief from carefully painted flat surfaces. This is really due to the absence of convergence, as proved by the fact that a photograph, the mountings being concealed, if seen with one eye alone appears to be an object in relief.

Passing to the automatisms of the higher intellectual processes, the lecturer discussed those uniformities which, some being general in the race, others being the result of special training, and already studied under the name of "laws of thought," markedly illustrate the doctrine of automatism as well as the power of the will to devote itself to such processes as may be chosen. Wordsworth has testified that his best poetry was created by allowing his mind to direct itself intently upon all the phases of his subject, and then waiting for a spontaneous outflow of poetical imagery from his mental mechanism. Mozart, whose musical faculty had from childhood been trained with most assiduous care, had only to think out the general plan of a composition, deciding as to the place to be given to solo, recitation, duet, quartette, etc., and then allow his thought to work of itself and evolve its own results. In the same way trained mathematicians solve difficult problems. But most instructive of all is the action of

memory. We endeavor to recall some half-forgotten fact, name, or date. After fixing the attention upon the subject for a certain length of time, and recalling every accessible circumstance, we find it better to withdraw the attention, to "hang up" the subject, and leave the matter to time. The general result will be a sudden return of the missing fact to the consciousness. In all these cases of "unconscious cerebration," it is noteworthy that we must first give direction to the process, and, moreover, that in order to obtain results we must previously train the automata. Other instances were given.

Evolutions of the judgment are also common under the same conditions of a previous training, antecedent fixing of the attention, and, as far as possible, a voluntary development of the process. Thus an executor unable to decide as to the best solution of a difficult provision in a will, arranged a plan which, though unsatisfactory, seemed the most feasible, and then dismissed the matter from his mind. Some days later, on waking from a sound sleep, a perfect plan flashed into his consciousness and was accepted without change. Experience has shown that these automata, once trained, work far better when left alone than when the attention is fixed upon them. When we apply the theory of automatism to our beliefs, there arises the question as to whether we are responsible for them, and whether we can believe what we wish to believe. The reply is that if we have accustomed ourselves to give due weight to all the evidence which may affect our conclusions, we are not responsible for our belief. We may, however, close our mental eyes to certain aspects of the case, just as an unjust judge may refuse to admit evidence on one side and unduly admit it on the other. In such case we are directly responsible for what we believe.

THE PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.—It is proposed to establish in this city a Polyclinic, and the faculty, so far as arranged, is constituted as follows: Dr. Chas. H. Burnett, Diseases of the Ear; Dr. J Solis Cohen, Diseases of the Throat and Nose; Dr. Henry Leffman, Clinical Chemistry and Toxicology; Dr. Richard H. Levis, Operative and Clinical Surgery; Dr. Morris Longstreth, Pathology and Post-mortem Examinations; Dr. Chas. K. Mills, Diseases of the Mind and Nervous System; Dr. Thos. G. Morton, Orthopædic and General Surgery; Dr. John B. Roberts, Applied Anatomy and Practical Surgery; Dr. Wm. Thomson, Diseases of the Eye; Dr. Jas. C. Wilson, Diseases of the Chest and General Medicine; Dr. John B. Roberts, Secretary. It is proposed to have a large building devoted solely to the purposes of the school. Dispensaries will be conducted in connection with each department, and instruction will be clinical and demonstrative, in series of short courses of from six to eight weeks; studies may be pursued in all branches or on special subjects. Demonstrators and assistants, with the professors, will give clinical lessons in each department daily. It is also proposed to furnish hospital accommodations for cases which require it.

ANNUAL ADDRESS BEFORE THE PHILADELPHIA ACADEMY OF SURGERY.—Dr. William Hunt will deliver the Annual Address before the Philadelphia Academy of Surgery on Monday evening, January 8th, at 8 o'clock, in the Hall of the College of Physicians —subject, Esmarch and Antisepsis.

COMPLIMENTARY DINNER TO PROF. AUSTIN FLINT, SR.—A number of prominent members of the medical profession of Philadelphia will entertain Prof. Flint at a dinner on next Friday evening. The chair will be occupied by Prof. Alfred Stillé.

SEMI-CENTENNIAL OF THE UNIVERSITY OF ZURICH.—The University of Zurich will, at the end of the current winter term, celebrate the fiftieth anniversary of its foundation.

LUMLEIAN, CROONIAN, AND GULSTONIAN LECTURES.—The Lumleian Lectures for 1883, at the Royal College of Physicians, will be delivered by Dr. A. B. Garrod, on "Uric Acid; its Relations to Renal Calculi and Gravel." The Croonian Lectures will be delivered by Dr. J. E. Pollock, the subject being "Modern Theories and Treatment of Phthisis;" and the Gulstonian Lectures, on the "Nature, Causes, and Treatment of Sterility in Woman," by Dr. Matthews Duncan.

STRAFFORD DISTRICT (N. H.) MEDICAL SOCIETY.—The 75th annual meeting of the Strafford District, New Hampshire, Medical Society was held at Dover, on December 19th, with Dr. S. C. Whittier, of Portsmouth, Chairman, and Dr. C. A. Fairbanks of Dover, Secretary. The following officers were elected for the ensuing year:

President.—Dr. John R. Ham, of Dover.
Secretary.—Dr. Charles A. Fairbanks, of Dover.
Treasurer.—Dr. Charles A. Tufts.

PORRO'S OPERATION.—On Nov. 27, DR. C. GODSON, Assistant Physician-Accoucheur to St. Bartholomew's Hospital, performed Porro's operation on a dwarf, aged 24, whose pelvis was distorted to an extreme degree. The patient was returned to her bed one hour after the commencement of the operation; the child was a girl, twenty inches in length, and eight pounds and a half in weight; the mother being but fifty-two inches in height. Up till November 29, the case was reported as doing well; the temperature had not risen above a maximum of 99.4° Fahr., and the pulse had never exceeded 80 beats per minute.—*British Medical Journal*, Dec. 2, 1882. Later accounts report steady progress toward cure.

THE PUBLIC HEALTH IN CONNECTICUT.—Dr. C. M. Chamberlain, Secretary of the State Board of Health, has just submitted his report for November, from which we learn that the record for November is in general more favorable than that for several preceding months. The prevalence of *scarlet fever* and of *diphtheria* increases the death-rates in several places. The probability of an increase in the frequency and malignancy of scarlet fever, stated in the last report, has become a certainty in repeated instances.

Measles is not reported in the mortality list, nor from any part of the State. Its prevalence for the last few years would indicate that there were few children left that had not had this disease, and in one or two instances its recurrence for the third time was mentioned.

Whooping-cough is reported more frequently than it has been for several months. Cases are stated to be in Simsbury, South Manchester, Haddam, and in the southern part of the State.

Diphtheria is reported from Avon, Hampton, Watertown, and Manchester—a few cases in each place.

The same general tendencies in *typhoid* and *malarial fevers* that have been noted the last few months continue. There is not any alarming prevalence of typhoid fever, nor has there been any degree of prevalence that would have been noticeable in former years, except in certain localities where there have been localized epidemics. The cases of typhoid fever are peculiarly interesting, because they are happening in localities where a case has not been reported for years, or where there have been very few cases. There has not yet been reported, taking the State as a whole, as

many cases as occurred each year on an average before the appearance of malaria, although this year approaches it.

There was in many places, and in general everywhere, as far as reports are received, an unusual amount of sickness during the autumn months, more marked where the local unsanitary conditions were worst. There is no occasion for a panic over the appearance of scarlet fever, but it is the part of wisdom to prevent its spread as much as possible. The utility of a hospital for contagious diseases suggests itself strongly when we see child after child in a poor man's family attacked by contagion from which he might have been saved could the first case have been isolated, as has been done with success again and again by means of such institutions. The idea is not a popular one at first, but others less so have proved their claims for recognition.

Lung fever appears early, and apparently the mortality corresponds with that of last year. Above the average cases are reported from North Manchester, Watertown, Hampton, and Avon, and one fatal case from Guilford.

Review of the Situation.—In comparison with preceding months this has been quite a healthful one. But the large percentage of zymotic diseases, and the amount of sickness indicated, show plainly that there were many agencies at work that could have been prevented.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending December 23, 1882, indicate that cholera morbus, diarrhœa, typhoid fever, and diphtheria have increased, and that intermittent fever, pneumonia, dysentery, and remittent fever have decreased in area of prevalence. Including reports by regular observers and by others, diphtheria was reported present during the week ending December 23, or since, at 16 places, scarlet fever at 10 places, and measles at 4 places. Smallpox was reported at Richmond, Osceola County, December 27.

PRECAUTIONS AGAINST CHOLERA.—Dr. Hampshire, the Senior Medical Officer of Penang, India, in his report for the month of September, intimates that the spread of cholera in the East and around the Straits, and its gradual extension in a westerly direction have caused considerable anxiety to the health authorities. To prevent its spread, when it occurs periodically, all measures have been taken so far as the legal powers permit, but native prejudices do not allow of their being carried out as effectually as in European countries. Doubts are entertained by the public, under the at present necessarily imperfect verification and registration of disease, as to whether all cases of cholera that have occurred have really been registered as such; but during the past few months the death registers at the different town and suburban police stations have been frequently examined, with the view of detecting any local increase in the mortality, should such occur. And in the case of doubtful entries, further inquiries have been made at the house of the deceased, among relatives and friends, in order to verify the diagnosis.

Among Chinese, who bury their dead in coffins hermetically sealed, with free disinfection as a preliminary, no great danger is involved in the burial rites; but among Hindoos and Mahommedans the body is retained in a room, crowded with relatives and friends, for a period varying from twelve to thirty-six hours, no disinfectants being used in the meanwhile. It is urged that, as Hindoos and Mahommedans, many of whom are aliens, constitute less than fifty per cent. of the population, some concession on their part is due to the majority of the population.

OBITUARY RECORD.—Died in Munich, on Dec. 5th, PROF. VON BISCHOFF in the 75th year of his age. Prof. v. B. was born in Hanover, Oct. 28, 1807, and studied natural science and medicine in Bonn and Heidelberg. After having served as an assistant in Berlin and Bonn, he was called in 1836 to Heidelberg to the chair of Comparative and Pathological Anatomy; in 1843 he was called to Giessen to the chair of Anatomy and Physiology, and 1855 to the same position in Munich, which he filled up to the time of his death.

His reputation rests on his numerous and valuable contributions to the embryology of mammals.

NOTES AND QUERIES.

MEDICINÆ SPECIALIS MAGISTER.

To the Editor of THE MEDICAL NEWS.

SIR: I see it stated in a recent journal that the Faculty of Medicine in Paris proposes creating "a higher doctorate than the simple M.D. It is proposed to confer the degree of "Doctor of Medical Sciences," after special examinations, and perhaps only after original work. The same journal goes on to say that America rapidly adopts European ideas, and that we may perhaps soon hear of a similar degree in this country. It has been rumored in the recently published accounts of the New York Post-graduate Medical School that there is a possibility of a degree higher than M.D. being conferred by that institution. If this or similar colleges for graduates, hereafter established, confer a degree, nothing appears to me so appropriate as "Master of Special Medicine." Such colleges are especially designed to give instruction in the specialties; hence the title "Medicinæ Specialis Magister" (M.S.M.) seems a proper designation for one who has passed an examination in such branches. It corresponds with the present custom of conferring the higher degrees in arts and surgery, as, for example, Artium Magister, Scientiæ Magister, Chirurgiæ Magister, and is, I think, preferable to "Doctor of Special Medicine," or "Doctor of Medical Specialties," which might also be suggested with a considerable degree of propriety.

Yours respectfully,

JOHN B. ROBERTS.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 25, 1882, TO JANUARY 1, 1883.

PERIN, GLOVER, *Lieutenant-Colonel and Surgeon.*—Granted leave of absence for one month, from the 19th inst.—*S. O. 217 Department of Dakota, December* 20, 1882.

BILL, JOSEPH H., *Major and Surgeon.*—Will report to the commanding officer, Fort Omaha, Neb., for duty.—*Par. 4, S. O. 134, Department of the Platte, December* 21, 1882.

KILBOURNE, H. S., *Captain and Assistant Surgeon.*—Granted leave of absence for one month, with permission to apply through Headquarters Military Division of the Missouri for an extension of two months.—*S. O. 218, Department of Dakota, December* 21, 1882.

REED, WALTER, *Captain and Assistant Surgeon.*—Relieved from duty as attending surgeon, headquarters Department of the Platte, and will report in person to the commanding officer Fort Omaha, Neb., for duty.—*S. O. 134, Department of the Platte, December* 21, 1882.

TURRILL, H. S., *Captain and Assistant Surgeon.*—Upon being relieved from duty at Fort Omaha, Neb., will proceed to Fort Fred. Steele, Wyoming, and report to the commanding officer of that post for duty thereat.—*Par. 5, S. O. 134, Department of the Platte, December* 21, 1882.

HOPKINS, WM. E,, *Assistant Surgeon.*—Granted leave of absence for two months, to commence January 1, 1883, with permission to apply for an extension of two months.—*Par. 1, S. O. 88, Military Division of the Atlantic, December* 28, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*